

STC Project No. 97/51  
ETC Project No. 97/52

# Data Gathering Projects

## Final Report

Report Compiled By: Martin Davies, CSAOG  
Malachy Carey, CSA

Research Work By: Michael O'Neill, CSA  
Jason Hayes, CSA  
Martin O'Neill, CSAOG  
Vikram Unnithan, UCD  
Andrew Wheeler, CRC-UCC

Approved By: \_\_\_\_\_  
Nick O'Neill

## CONTENTS

INTRODUCTION.....	2
DATA SOURCES.....	3
LINE DATA .....	4
POINT DATA.....	4
SOC AND SAMS DATA.....	5
OTHER DATA .....	5
MAPS .....	5
DATABASES .....	5
DATA QUALITY .....	6
DATA GAPS .....	6
BIBLIOGRAPHY.....	7

## **APPENDICES**

- APPENDIX 1 List of acronyms and summary of key marine research programmes.
- APPENDIX 2 List of universities and institutes involved in marine research in the north-east Atlantic.
- APPENDIX 3 List of websites with data relevant to NE Atlantic marine research.
- APPENDIX 4 Details of research cruises, sorted by year and by ship name.
- APPENDIX 5 Details of cruises which collected geological data.
- APPENDIX 6 Details of cruises which collected biological data.
- APPENDIX 7 Details of cruises which collected seabed imagery data.
- APPENDIX 8 Vickers Voyager/Pisces III line data.
- APPENDIX 9 SOC and SAMS sample storage data.
- APPENDIX 10 Examples of datasets from internet websites.
- APPENDIX 11 Drafted maps
- APPENDIX 12 Additional maps

## **BIBLIOGRAPHIES**

STC BIBLIOGRAPHY

ETC BIBLIOGRAPHY

## **INTRODUCTION**

The importance of compiling and evaluating existing data in the Rockall Trough and surrounding areas was identified at the first meetings of the Petroleum Infrastructure Programme Group 2 (PIP 2) participants. Initially the Seabed technical committee (STC) identified this as an early requirement in its review programme and CSA Oil & Gas Services Ltd were asked to carry out the work (RSG Project No 97/51). At a later stage the Environmental technical committee (ETC) asked CSA Oil & Gas Services Ltd to carry out a similar review for them as an extension of the ongoing STC review (RSG Project No 97/52). Other reviews are being carried out for the Sub-Sea technical committee (SSTC) by ERA-Maptec (RSG Project No 97/3) and for the Metocean technical committee (MTC) by the Irish Marine Data Centre (IMDC) (RSG Project No 97/29). Efforts have been made to try and avoid unnecessary overlap between the projects.

The STC and ETC projects were designed to undertake a quick review of the marine data available for the Irish offshore designated area west of Ireland. Particular emphasis was placed on the Rockall Trough, the Rockall and Porcupine Banks and the marginal basins on the flanks of the Rockall Trough.

Over the last 40 years, the vast majority of cruises were carried out by government research vessels as a part of national maritime research programmes (for example NERC funding from the UK Government). Some international programmes, such as the Deep Sea Drilling Project (DSDP), have been working throughout this period, but others, such as the various EU programmes and UNESCO, have generally started in the last 10 years. Additional work, mostly hydrographic, has been carried out by naval vessels on behalf of national defence agencies.

CSA Oil & Gas Services (CSAOG) worked closely on these projects with the Geology Department of University College Dublin (UCD) and with the Coastal Resources Centre at University College Cork (CRC-UCC). Pat Shannon supervised the UCD team comprising Vikram Unnithan, Angela McDonnell and Josta Vermeulen. At CRC-UCC most of the work was carried out by Andy Wheeler with assistance from post-graduate students.

UCD concentrated on data available in Dublin at UCD, DIAS (Dublin Institute of Advanced Studies), GSI (Geological Survey of Ireland) and PAD (Petroleum Affairs Division of the Department of Marine and Natural Resources).

CRC-UCC concentrated on data available at UCC and the extensive collections held by Southampton Oceanographic Centre (SOC) and the Scottish Association for Marine Science (SAMS). A number of other data sets, such as IOS (UK Institute of Oceanographic Science) and Deacon Labs are now held by SOC.

Cruises carried out by other European countries, such as Norway, Denmark, Germany, Netherlands, Belgium and France were covered by both groups. North American and older cruises were researched over the internet using the NGDC data system in the US.

CSAOG co-ordinated the project and concentrated on the bibliography and on sourcing data from the internet. CD-ROM data searches were organised by CSAOG at the Geological Society in London and at the Fisheries Research Centre (FRC) in Dublin. Additional bibliographic data was received from UCD, CRC-UCC, PAD and BGS.

## **DATA SOURCES**

Substantial progress has been achieved in identifying the major cruises of the past 25 years. The Department of Geology, University College Dublin has been involved in a large number of the recent cruises and much of the data is available in-house. Information was also obtained from the Geological Survey of Ireland (GSI), Marine Data Centre, Petroleum Affairs Division (PAD), British Geological Society (BGS) and Southampton Oceanographic Centre (SOC). The GSI in particular has a very large collection of cruise reports and cruise proposals. Unfortunately, many of documents are incomplete. The PAD provided a list of cruises. The Marine Data Centre suggested a number of very useful sites on the World Wide Web. The BGS and the SOC libraries contain nearly all the cruise reports relating to the UK oceanographic fleet but we do not have direct access to these databases.

The World Wide Web has a number of searchable databases relating to marine research activity in the northern Atlantic. The most important of these are the ROSCOP (Appendix 10) and the U.S. National Geophysical Data Centre's GEBCO (Appendix 10) databases which contain concise details on the various cruises in the region. The ROSCOP database contains oceanographic, geological, meteorological and biological information regarding all the cruises in the Atlantic dating back to 1960 (see <http://www.ices.dk/ocean/roscop.htm>). One of the problems with this database is that there is a backlog in processing the various cruise reports. The procedure of submitting cruise reports in a specific format is time consuming and depends solely on the diligence of the reporting institution. Generally speaking, the ROSCOP database does not have a complete record of cruises for the last 10 years.

The NGDC GEODAS database consists of trackline geophysics data which includes sidescan sonar, refraction and reflection seismics, bathymetry etc. collected by survey vessels of a number of nationalities. The data is freely available on-line for downloading from the site [http://www.ngdc.noaa.gov/mgg/gdas/gd\\_sys.html](http://www.ngdc.noaa.gov/mgg/gdas/gd_sys.html). There is also a separate NGDC database for geological core data.

The French SISMER site <http://www.ifremer.fr/sismer/> provides excellent cruise summaries of most French cruises world-wide. The summaries available on the WWW are concise and give a very good overview of the cruises. Most of the summaries also include a cruise track. Data from 1995 to date is often unavailable or incomplete.

The British Oceanographic Data Centre (BODC) at the WWW site <http://www.nbi.ac.uk/bodc/bodcmain.html> provides information regarding cruises that have taken place as a result of joint international scientific ventures i.e. OMEX, LOIS, MAST, ENAM, etc. There is no information relating to cruises funded or sponsored by UK based institutions i.e. NERC, SOC (formerly IOS), BGS and various universities.

The main problem encountered while dealing with these various databases was the lack of consistency in data formats. Extraction of information on geology- and geophysics- based cruises in the North Atlantic and its amalgamation into a single spreadsheet has been difficult.

The following are some important WWW sites:

- |   |  |
|---|--|
| 1. <a href="http://www.ucc.ie/ucc/research/crc/enam1.htm">http://www.ucc.ie/ucc/research/crc/enam1.htm</a>  | <b>ENAM II site</b>                              |
| 2. <a href="http://www.nioz.nl">http://www.nioz.nl</a>  | <b>The NIOZ WWW Pages</b>                        |
| 3. <a href="http://www.ices.dk/ocean/project/mast">http://www.ices.dk/ocean/project/mast</a>  | <b>MAST site</b>                                 |
| 4. <a href="http://www.nbi.ac.uk/bodc/bodcmain.html">http://www.nbi.ac.uk/bodc/bodcmain.html</a>  | <b>British Oceanographic Data Centre</b>         |
| 5. <a href="http://www.ifremer.fr/sismer/">http://www.ifremer.fr/sismer/</a>  | <b>French Cruise Reports</b>                     |
| 6. <a href="http://www.marine.ie">http://www.marine.ie</a>  | <b>Irish Marine Institute</b>                    |
| 7. <a href="http://www.ngdc.noaa.gov/mgg/geology/geology.html">http://www.ngdc.noaa.gov/mgg/geology/geology.html</a>  | <b>NGDC Marine Sediment &amp; Rock Data</b>      |
| 8. <a href="http://www.ngdc.noaa.gov/mgg/curator/curator.html">http://www.ngdc.noaa.gov/mgg/curator/curator.html</a>  | <b>NGDC-Index to Marine Geology</b>              |
| 9. <a href="http://www.ngdc.noaa.gov/mgg/gdas/gd_sys.html">http://www.ngdc.noaa.gov/mgg/gdas/gd_sys.html</a>  | <b>GEODAS - Marine Geophysical data</b>          |
| 10. <a href="http://www.cms.udel.edu/ships">http://www.cms.udel.edu/ships</a>   | <b>Research Ship Information &amp; Schedules</b> |
| 11. <a href="http://www.ices.dk/ocean/roscop.htm">http://www.ices.dk/ocean/roscop.htm</a>   | <b>ROSCOP - Cruise Summary Reports</b>           |
| 12. <a href="http://www-odp.tamu.edu/publications/prelim/162_Prelim/162TABLE.HTML">http://www-odp.tamu.edu/publications/prelim/162_Prelim/162TABLE.HTML</a> | <b>Leg 162 Preliminary ODP Report</b>            |

A more detailed list of websites is included as Appendix 3.

## **LINE DATA**

Line data is predominantly geophysical and bathymetric and is collected whilst the vessel is sailing along a specific course. This data type covers seismic reflection and refraction (deep, intermediate and shallow), gravity, magnetics, side-scan sonar (various types including GLORIA and TOBI), swath bathymetry (SIMRAD EM 300 or similar) and echo-sounding. Other imagery systems such as sea-bottom TV can be line or point data. Other data, such as temperature, salinity and other oceanographic data is also acquired on some surveys.

## **POINT DATA**

Point data is the other main data type. This includes cores and dredge samples for geological, geotechnical and biological purposes. A wide variety of techniques are used with variable success. Most samples range from a few centimetres to a few metres in depth and the techniques used to recover the sample from the seabed severely limit the analyses that can be carried out on the samples.

Another major category is cored boreholes. Most of these have been carried out by organisations such as the BGS in shallower waters or by the DSDP or ODP in deeper waters. The BGS shallow coring data (mainly in 1994) over the UK Rockall Sector is still confidential, but may be due for release shortly. There are also some oil industry deep stratigraphic tests, but none so far in Irish waters. A number of DSDP and ODP

boreholes have been drilled on and around the Rockall micro-continent in the last 30 years. Some rock samples have also been recovered using submersibles such as CYANA and PISCES III.

Some data, such as dredge or grab samples, are generally considered point data, as are photo systems such as WASP or Photo-sledge.

### **SOC AND SAMS DATA**

Lists of core samples held by SOC and SAMS, predominantly collected for biological data, are given in Appendix 9. The data for the samples is incomplete, but represents the best available at present

### **OTHER DATA**

Fisheries data, bird and cetacean data and much of the oceanographic and meteorological data, can be both point and line data, but is largely outside the scope of this study. It has been included where the data is available, usually from multi-disciplinary cruises.

### **MAPS**

Maps have been prepared for most of the more important cruises showing the cruise tracks (Appendix 11). In some cases maps have also been prepared showing core or dredge locations. Detailed lists of core samples can be found in Appendix 10 of this report and on the attached CD-ROM.

### **DATABASES**

Data has been compiled on Excel spreadsheets. There is a summary spreadsheet listing all the main cruises offshore the West of Ireland. This lists, where known, the programme name, ship, source of funding, cruise dates, descriptive location, co-ordinates, chief scientist, contact address, data types and comments. Five versions are provided in the text: an alphabetical list by vessel name, a list by cruise year, a list of cruises with geological/geophysical data, a list of cruises acquiring imagery and a list of cruises with biological data. A list of upcoming cruises (1998 and later) is also included. These spreadsheets are also on the CD-ROM and can be searched or input into database systems by the RSG members.

Numerous more detailed spreadsheets have been prepared for each of the more important cruises listing the exact data acquired, samples recovered and their location, where known. This has proved difficult and time-consuming to compile, as the data and samples

are often dispersed to a wide number of locations over the years. This data is incomplete as the amount of effort and time required to undertake this task proved excessive. Most of this detailed data has been placed on the CD-ROM as it would make the report unnecessarily bulky.

## **DATA QUALITY**

There are several aspects to data quality.

First there is the quality of the original data acquired at the time of the survey. Obviously technology has advanced with time and many older surveys (especially seismic or imagery) are less useful than the more modern ones. This does not however generally apply to core samples providing they were properly analysed at the time.

Second there is the accuracy to which that data is positioned. In the older surveys, pre satellite navigation, accuracy was often poor when far from the coast (as in Rockall). This may not be a problem in a general sense, but can become one when attempting to repeat sampling or line surveys in the same place some years later.

Third, the data quality has often deteriorated with time. Tapes of seismic or imagery data are often in poor condition and may be unusable after 20 years. The core and biological samples may have been completely used up or have decayed to dust.

## **DATA GAPS**

Data gaps tend to be type specific. For example, an area that is well covered by seismic may have few core samples. It also depends on what the data is being used for. A plot of core samples may suggest the area is well sampled, but few or even none of them may be suitable for geotechnical studies. Identifying this level of data gap is difficult as it relies on detailed lists of all the analyses carried out on samples from a particular cruise. This data is difficult to obtain.

Some generalisations can be made:

1. Generally there are more samples of all types on the east flank of the Rockall Trough.
2. The northern part of the east flank, near the UK boundary, is better sampled and surveyed than the area further south off the Porcupine Bank.
3. Deep cores are very sparse and are concentrated in certain areas (see DSDP / ODP map).
4. Specific sample types, such as "basement" samples are obviously related to areas of known outcrop. A review of the regional seismic cover, both commercial and academic, may be able to suggest other areas where additional samples could be

obtained. There is considerable uncertainty about whether some samples are in-situ or are boulders dropped from icebergs (especially drag, grab and even submersible samples).

5. Biological samples are concentrated in certain areas such as the Porcupine Seabight. Other clumps of samples are in and around long-term observation sites in the Rockall Trough. The vast majority of biological samples were collected by UK research vessels and are held in SAMS in Scotland or at SOC.
6. Imagery is more widespread than expected, but much of the data is not yet released. Nearly all the relevant GLORIA data is held by UCD and is currently being interpreted as a part of PhD studies. The data will be released when these studies are completed.
7. Shallow seismic is often hard to distinguish from deep seismic in the ROSCOP, ICES and other databases. Many vessels have acquired Sparker data in conjunction with bathymetry or deep seismic surveys. Most of the recent geoscience cruises have acquired two or even three types of seismic data (e.g. Pelagia, Belgica, Logachev, etc.)

## **BIBLIOGRAPHY**

Very extensive bibliographies have been compiled for the both the STC and ETC studies. There is some overlap with both the SSTC (deep geology and geophysics) and the MTC (meteorology, climatology, oceanography).

A number of organisations deserve particular thanks for their contribution to the bibliographies. These include the PAD, BGS, UCD Geology Dept, UCC-CRC and FRC.

The very extensive nature of the bibliographies compiled for the RSG suggest that they could be suitable for publication. Such bibliographies are often published and could serve to assist and encourage research in the region.

## **ADDRESSES OF MARINE RESEARCH INSTITUTIONS**

The addresses of all the main European institutions and selected North American institutions are given in Appendix 2.

## **LIST OF KEY RESEARCH PROGRAMMES AND ACRONYMS**

As the reviews progressed it was realised that a vast array of abbreviations and acronyms are used in the marine research sector. It was decided to list these in Appendix 1, along with brief descriptions. This list is by no means exhaustive, but should prove useful to those confused by the multiplicity of names.



## **APPENDIX 1**

### **LIST OF ACRONYMS AND SUMMARY OF**

### **KEY MARINE RESEARCH PROGRAMMES**

**AFEN**            Atlantic Frontier Environmental Network - an oil industry group formed to carry out environmental surveys (TOBI and benthic sampling) along the NW UK shelf margins (mainly West of Shetlands).

**AIR**            An EU fisheries research programme.

**ALIPOR**        Autonomous Lander Instrumentation Packages for Oceanographic Research - a seabed lander being developed as part of the EU MAST III programme. Project led by SOC. Partners IFREMER, GEOMAR, Chambers University Goteborg, Technical University of Harburg-Hamburg, NIOZ, UCG, Aberdeen University, Alfred Wegener Institute, IMBC Greece and SAMS

**ASFA**           Aquatic Sciences and Fisheries Abstracts - international CD-ROM database.

**BENBO**        The deep ocean BENThic BOundary layer - a UK thematic programme on the Deep Ocean Benthic Boundary. Three sites chosen for monitoring - mouth of Rockall Trough, Hatton-Rockall Basin and Flank of Feni Drift. Links to BENGAL, SES, LOIS, OMEX and ALIPOR. Project led by SAMS. NERC funding (plus EU?).

**BENGAL**       BENThic biology and Geochemistry of a NE Atlantic abyssal locality - an EU programme funding benthic lander technology; organic, inorganic and radio-chemical analytic techniques and modelling. 17 partners in 9 countries, including data management by IMDC. Responsible for cruises to Porcupine Abyssal Plain site to monitor benthic community structure 1996 to date.

**BGS**            British Geological Survey, formerly IGS (Institute of Geological Sciences). Incorporates GSNI (Geological Survey of Northern Ireland).

**BIRPS**        British Institutions Reflection Profiling Syndicate - founded in 1981, acquires, processes and interprets seismic data from the lithosphere. Series of deep seismic lines offshore NW Europe, including several off West of Ireland. Co-ordinated by Dept of Earth Sciences, Cambridge University.

**BODC**        British Oceanographic Data Centre - based at POL in Birkenhead. Repository for all oceanographic data acquired in UK waters or in UK vessels overseas.

**BSH**            Bundesamt fur Seeschifffahrt und Hydrographie - Federal Maritime and Hydrographic Agency of Germany, responsible for Oceanographic Data Centre and cruise planning by all German research vessels. Extensive data on internet, some in English.

**CCMS**        Centre for Coastal and Marine Sciences - a NERC-funded body encompassing SAMS/DML, PML and POL

CHAOS Chemical and Hydrographic Atlantic Ocean Survey - SOC programme in North Atlantic to support WOCE.

CLAMS Oceanographic model by CLS Toulouse

CONSLEX Continental Slope Experiment - a UK collaborative effort by SOC, POL, SAMS and Min of Agriculture to study water movements across Scottish continental margin in 1982-1983.

CORSAIRES EU programme co-ordinated by the Renard Centre of Marine Geology at the University of Gent (Jean-Pierre Henriët). Includes The Norway-Faroe-Rockall Core Group studying area from Bill Bailey Bank northwards, specialising in shelf stratigraphy, sedimentation, fans, slides and debris flows and contourite deposits. The Porcupine-Celtic Sea-English Channel Core Group covers the Porcupine Seabight southwards, specialising on carbonate build-ups in the Porcupine the Celtic Sea Shelf Edge and Fan and the Hurd Deep in the Channel.

DML Dunstaffnage Marine Laboratory at Oban on west coast of Scotland. Home of SAMS and part of CCMS. Centre for research in benthic communities off west coast of Scotland and Ireland.

DSDP Deep Sea Drilling Project - a major international world-wide deep coring programme in the deep oceans. Now replaced by ODP.

ENAM European North Atlantic Margin - an EU research programme along Atlantic Margin addressing mass wasting, slope stability, benthos, etc. Split into 3 phases: ENAM I (1993-1996 - pathways, processes and fluxes) concentrated on Portuguese/French margin and Faroe/Norwegian margin and ENAM II (1996-1999 - quantification and modelling of large-scale sedimentary processes and fluxes) concentrated on Rockall Trough and Irish margin. Current phase co-ordinated by GEOMAR including partners: SOC, IFREMER, Bergen, Kiel, Goteborg, Aberystwyth, NERC, SOC, DGU, Oslo, Tromsø, Gent and UCC/CRC. Data management by IMDC.

EUROGOOS European Global Ocean Observing System - European arm of international oceanographic programme.

FAR An EU fisheries research programme.

FAIR An EU fisheries research programme.

FRC Irish Fisheries Research Centre, a part of the Irish Marine Institute. Closed involved in ICES programme.

GEBCO General Bathymetric Chart of the Oceans - Bathymetry database of the world co-ordinated and maintained by POL on behalf of international community. Originally published as maps, now published as a CD-ROM.

GEOMAR The German Institute of Marine Studies based in Kiel.

GEOREF      International geological CD-ROM database

GEOSTAR    An EU MAST programme to develop a geophysical and oceanographic station for abyssal research. Led by ING in Italy.

GLORIA      A surface towed side scan sonar system developed by SOC. Widely used in the NW European offshore and off the US coast. Extensive surveys in Irish waters. Produces lower quality, but cheaper imagery than TOBI.

GSI          Geological Survey of Ireland.

ICES        International Council for the Exploration of the Sea - Intergovernmental organisation set up in 1902. Fisheries, Pollution and Oceanographic databanks. Based in Copenhagen. Home of North Atlantic ROSCOP.

HEBBLE     High Energy Benthic Boundary Layer Experiment - UK research programme in early 1980's.

IfM          Institute for marine research at University of Kiel, Germany. Actively involved in oceanographic research in North Atlantic, including Irish waters.

IFREMER    The French Institute for Marine Research. Major centres in Brest, Marseilles and Bordeaux.

IOS          Institute of Oceanographic Sciences in UK, now a part of SOC.

JASIN       Joint Air-Sea Interaction Project designed to study the interaction of atmospheric and oceanic boundary layers with large scale motions of sea and air. Major project in 1978 in UK Rockall Trough.

JGOFS       Joint Global Ocean Flux Study.

JNCC        Joint Nature Conservation Committee - UK government group responsible for, amongst others, the offshore monitoring of seabirds and cetaceans. Extensively involved in Irish waters, especially Rockall Trough.

LDEO        Lamont-Doherty Earth Observatory- US organisation involved in North Atlantic research, especially geology and geophysics. Home of LDEO Deep Sea Core dataset - can be searched online.

LOIS        Land Ocean Interaction Study - an NERC/EU MAST programme.

MAFF        UK Ministry of Agriculture, Fisheries and Food. Often funds fisheries cruises.

MAST        Major EU programme covering all aspects of marine science and technology. Now in MAST III (1996-1999), but will be discontinued in 1999. ENAM is a component of MAST.

**NERC** National Environmental Research Council - UK government agency responsible for all UK scientific research. Owner of UK research vessels based at SOC.

**NESS** An oil industry group formed to model NE European Atlantic Margin weather data. Hindcast 1964-1995. Current members are Amoco, BP, Conoco, Esso, Marathon, Mobil, Saga, Shell, Statoil, Texaco, RWS and HSE.

**NGDC** National Geophysical Data Centre in US. An international repository for all geological, geophysical and bathymetric data from scientific and naval cruises world-wide. Both geophysical and geological core data can be searched for and plotted online, but unfriendly interface.

**NOAA** US government organisation responsible for oceanographic research.

**NWAG** North Western Atlantic Group - an oil industry group formed to model currents and oceanographic data. Current members are Amerada, Amoco, Arco, BP, Chevron, Conoco, Elf, Enterprise, Esso, Marathon, Mobil, Phillips, Saga, Shell, Statoil, Texaco, Total and HSE.

**OCEANIC** US based oceanographic programme. Extensive database of world-wide research vessels and their research programmes.

**ODP** Ocean Drilling Programme - the current international world-wide deep coring programme. Dataset currently hosted by Texas A&M University - can be searched online.

**OMEX** Ocean Margin EXchange - OMEX I, an EU MAST II programme (1993-1996) for physical and chemical oceanography focused on Goban Spur area initially with some work on Hebrides Shelf Edge. OMEX II (1996-1999) will focus on Iberian margin, with some data from Irish and UK waters. POL co-ordinates physics component.

**PML** Plymouth Marine Laboratory. A centre in SW England, part of CCMS, specialising in oceanographic research.

**POL** Proudman Oceanographic Laboratory located in Birkenhead, near Liverpool. Part of CCMS. Specialises in physical and chemical oceanography and is closely involved in OMEX and LOIS. Also the home of GEBCO and BODC (British Oceanographic Data Centre).

**POSEIDON** EU programme, under MAST III, to develop new technology for surveying the sea floor and sub-bottom and predicting slope stability hazards in water depths between 300m and 2000m. Co-ordinated by GEOMAR. Several tools being developed including TOBI by SOC and other modules by GEOMAR and IFREMER.

**RAPIDS** A deep seismic research programme carrying out seismic acquisition off western Ireland. Jointly run by Kiel and UCD. RAPIDS 1 (1988), RAPIDS 2 (1990), RAPIDS 3 (planned 1999).

**ROSCOP** Reports of Oceanographic Cruises and Oceanographic Programmes - a standardised international reporting format for scientific research cruises conceived by IOC in late 1960s and revised in 1990. Published by ICES for North Atlantic.

**SAMS** Scottish Association for Marine Science located at Dunstaffnage near Oban in Scotland. Part of CCMS and works closely with SOC. Leading researchers into marine and deep sea invertebrates and biomarkers. Involved in BENGAL, BENBO, ALIPOR, SES, LOIS.

**SEFOS** Shelf Edge Fisheries Oceanographic Study. UK based study with particular interest in the Porcupine Bank spawning area.

**SES** Shelf Edge Study - a constituent of the LOIS programme. Study area is Irish shelf edge from offshore Mayo north to the UK shelf edge in the Hebrides. Includes imagery, benthos, and metocean, especially current meters. POL co-ordinates and participants are: SAMS, SOC, IFREMER, PML, 6 universities.

**SISMER** French organisation responsible for databasing oceanographic, biological, geological and geophysical datasets. Associated with IFREMER.

**SOC** Southampton Oceanographic Centre. The premier UK centre for all forms of oceanographic research. The base for the NERC fleet of research vessels. Now incorporates the former Institute of Oceanographic Science, Deacon Labs, SAMS, PML, etc.

Challenger Division covers Benthic Biology, Sedimentary Processes, Crustal Processes and Chemical Changes and Fluxes groups. George Deacon Division covers hydrography, biology and chemistry. James Rennell Division covers Satellite imagery, Modelling Ocean Circulation and Climate, Meteorology and Surface Fluxes, and Hydrography. There is also an Ocean Technology Division.

**TOBI** A deep towed side scan sonar system developed by SOC. Widely used in Norwegian and UK waters and elsewhere. Limited use in Irish waters to date. High quality imagery, but slow and expensive to acquire.

**TOPEX/POSEIDON** a joint US/French programme to monitor global ocean circulation and to discover the tie between the oceans and the atmosphere. Uses joint US/French satellite since 1992. Follow-on programme called Jason-1.

**TTR** Training Through Research - A UNESCO-IOC programme of world-wide international co-operation utilising post-graduate students as crew on various vessels (often Russian). The TTR7 cruise, Legs 1 and 2, used the RV Professor Logachev in the Porcupine and Rockall in 1997. The programme is run by Mikhail Ivanov out of Moscow State University (MSU) with Neil Kenyon (SOC) as western co-ordinator.

**UCC** University College Cork, part of the National University of Ireland

**UCD** University College Dublin, part of the National University of Ireland

UCG            University College Galway, part of the National University of Ireland

VIVALDI      UK contribution to WOCE in 1991. Series of seasonal trails in North Atlantic. But also going in 1996 in Rockall.

WAM            Climate model (ECMWF) developed by Hamburg University.

WESTLINE    A deep seismic line west of Ireland, acquired in 1993 by BIRPS.

WHOI           Woods Hole Oceanographic Institution, a leading US oceanographic research institution that carries out work in the North Atlantic and in Irish waters.

WOCE           World Ocean Circulation Experiment - a world-wide programme to study (1990 to date) ocean circulation by satellite and surface measurement. In North Atlantic major partners are US, UK, Germany and France with virtually all European countries involved at some level.

**APPENDIX 2****LIST OF UNIVERSITIES AND INSTITUTES INVOLVED IN  
MARINE RESEARCH IN THE NORTH-EAST ATLANTIC**

University of Aberdeen  
Department of Zoology  
Tillydrone Avenue  
Aberdeen, AB9 2TN  
Scotland, U.K.  
Tel : +44 1224 272873 Fax : +44 1224 272396  
Dr I.G. Priede e-mail : i.g.priede@abdn.ac.uk  
Scott Bradley s.bradley@aberdeen.ac.uk  
Steve Addison s.addison@aberdeen.ac.uk  
Emma Jones e.g.jones@aberdeen.ac.uk  
Dr Martin Collins m.a.collins@aberdeen.ac.uk  
Dr Jennifer J. Watson j.j.watson@abdn.ac.uk  
Dr Peter Gray (Dept. of Engineering) pete@eng.abdn.ac.uk

University of Aberdeen  
Department of Geology & Petroleum Geology  
Meston Building, Kings College  
Aberdeen AB24 2UE, UK  
Tel: +44 1224 273 433 Fax: +44 1224 172 785  
Bryan T. Cronin e-mail: cronin@abdn.ac.uk

Alfred-Wegener-Institut für Polar und Meeresforschung  
Columbusstrasse  
27568 Bremerhaven  
Germany  
Tel : +49 471 4831 727 Fax : +49 471 4831 724  
Prof. Hjalmar Thiel  
e-mail : hthiel@AWI-Bremerhaven.de

Alfred-Wegener-Institute for Marine and Polar Research  
Postfach 120161, 27515 Bremerhaven  
Germany  
Tel: + 49 471 4831 316 Fax: + 49 471 4831 149  
Dr. Tom Brey  
Email: tbrey@awi-bremerhaven.de

UNIAN, University of Ancona  
Marine Biology Section  
Facolta di Science  
Universita di Ancona  
Via Brece Bianche  
60131 Ancona, Italy  
Tel: + 39 71 220 4514 Fax: + 39 71 220 4513  
Dr. Roberto Danovaro  
Email: danovaro@anvax1.unian.it

Geologisk Institutt  
Universitetet i Bergen  
Allegaten 41  
N-5007 Bergen  
Norway  
Phone: +47 5558 3505 Fax: +47 5558 9416/17

E-Mail: sejrup@geol.uib.no  
Hans-Petter SEJRUP

Coastal Resources Centre  
University College Cork  
Lee Maltings  
Prospect Row  
Cork, Ireland  
Phone: +353 21 276871 Fax: +353 21 277922 / 271980  
E-Mail: r.devoy@bureau.ucc.ie  
Robert John DEVOY  
Andrew WHEELER

Department of Geology  
University College Dublin  
Belfield, Dublin  
Ireland  
Tel: +353 1 706 2323 Fax: +353 1 283 7733  
Dr Pat SHANNON e-mail: p.shannon@ucd.ie

DIAS - Dublin Institute of Advanced Studies  
Dept of Geophysics  
School of Cosmic Physics  
5 Merrion Square  
Dublin 2, Ireland  
Tel: +353 1 662 1333 Fax: +353 1 662 1477  
Prof Brian JACOB e-mail: bj@cp.dias.ie  
Prof Peter READMAN e-mail: pr@cp.dias.ie

DGU  
Geological Survey of Denmark,  
Thoravej 8  
DK 2400-Copenhagen NV  
Denmark  
Phone: 45-31-106600 Fax: 45-31-196868  
E-Mail: aku@dgu2.dgu.min.dk  
Antoon KUIJPERS

Scottish Association for Marine Science  
Dunstaffnage Marine Laboratory  
PO Box 3,  
Oban, PA34 4AD  
Argyll, Scotland  
Tel: + 44 1631 562244 Fax: + 44 1631 565518  
Dr. John D. Gage  
Email: jdg@wpo.nerc.ac.uk  
Martyn Harvey mhar@dml.ac.uk  
David Meldrum dtm@dml.ac.uk

Hamburg University  
IFH  
Zeiseweg 9  
22765 Hamburg, Germany  
Tel: + 49 40 4123 6680 Fax: + 49 40 4123 6696  
Dr. Horst Weikert  
Email: weikert@rrz.uni-hamburg.de



IFREMER - Institut Français de Recherche pour l'Exploitation la Mer  
Centre de Brest  
B.P. 70-29280 Plouzané  
France  
Phone: +33-2-98-224259 Fax: +33-2-98-224570  
E-Mail: gauffret@ifremer.fr  
Gérard-André AUFFRET

Dr. Myriam Sibuet  
Tel: +33 2 98 22 43 03 Fax: +33 2 98 22 45 47  
Email: Myriam.Sibuet@ifremer.fr

Dr Alexis Khripounoff  
Tel : +33 98 22 4298 Fax : +33 98 22 4496  
e-mail : akripoun@ifremer.fr

Jean Claude Caprais jcaprais@ifremer.fr  
Annick Vangreisheim avangri@ifremer.fr  
Phillipe Rodier prodier@ifremer.fr  
Jacques Legrand jlegrand@ifremer.fr  
Dominique Birot Dominique.Birot@ifremer.fr  
Laurent Delauney Laurent.Delauney@ifremer.fr  
Jean-Francois Rolin Jean.Francois.Rolin@ifremer.fr  
Jerome Blandin Jerome.Blandin@ifremer.fr

Institut Océanographique  
Lab. De Physiologie des Etres Marins  
195 rue Saint Jacques  
75005 Paris, France  
Tel: + 33 1 4325 6110 Fax: + 33 1 4051 7316  
Dr. L. Laubier

Centre d'Océanologie de Marseille  
Station marine d'Endoume  
Rue de la Batterie des Lions  
F - 13007 Marseille  
Tel: + 33 4 91 04 16 01 Fax: + 33 4 91 04 16 35  
Dr. L. Laubier  
Email: laubier@com.univ-mrs.fr

Centre des Faibles Radioactivites (CNRS/CEA)  
Domaine du CNRS  
91198 Gif-sur-Yvette  
France  
Tel: + 33 1 69 82 3530 Fax: + 33 1 69 82 3568  
Dr. C. Rabouille  
Email: rabouille@cfr.cnrs-gif.fr

URA CNRS 1513  
Institut Universitaire Européen de la Mer  
6 Av. le Gorgeu.  
29285 Brest Cedex  
France  
Tel: + 33 2 98 01 7002 Fax: + 33 2 98 01 6636  
Prof. Paul Treguer  
Email: treguer@univ-brest.fr

Irish Fisheries Research Centre  
Irish Marine Institute  
Abbotstown  
Castleknock  
Dublin 15  
Ireland  
Tel: +353-1-821 0111 Fax: +353-1- 820 5078  
Eugene NIXON e-mail: enixon@frc.ie

Irish Marine Data Centre  
Irish Marine Institute  
80 Harcourt Street  
Dublin 2, Ireland  
Phone: +353-1-4757100 Fax: +353-1-4757104  
Ms Bronwyn CAHILL  
Ms. Órla Ní Cheileachair / Ms. Theresa Kennedy  
Email: orla.ni@marine.ie  
Email: Theresa.Kennedy@marine.ie

JNCC - Joint Nature Conservancy Committee  
Seabird Monitoring Programme  
17 Rubislaw Terrace  
Aberdeen AB1 1XE, UK  
Tel: +44 1224 642 863 Fax: +44 1224 643 347  
Mark TASKER e-mail: tasker\_m@jncc.gov.uk

University of Liverpool  
Oceanography Labs  
Dept. of Earth Sciences  
University of Liverpool,  
P.O. Box 147,  
Liverpool, L693BX, UK  
Tel: +44 151 794 4094 Fax: + 44 151 794 4099  
Dr. George Wolff  
Email: wolff@liv.ac.uk

University College Galway,  
Martin Ryan Marine Research Institute  
Galway, Ireland  
Anthony Grehan anthony.grehan@ucg.ie  
Martin Solan martin.solan@ucg.ie  
Stuart McWilliams mcwillis@tcd.ie  
John W. Patching john.patching@ucg.ie  
Tel: + 353 91 524411 Fax: + 353 91 525005  
Brendan Keegan brendan.keegan@ucg.ie  
Tel : +353 91 750351 Fax : +353 91 525005

GEOMAR  
Research Centre for Marine Geosciences,  
Tel: + 49 431 7202 289 Fax: + 49 431 7202 293  
Dr. Olaf Pfannkuche  
Email: opfannkuche@geomar.de  
Dr. P. Linke plinke@geomar.de  
Axel Cremer acremer@geomar.de  
Ursula Witte uwitte@geomar.de  
Laurenz Thomsen lthomsen@geomar.de  
Frank Appel fappel@geomar.de  
Michael Poser craftsoft1@aol.com

## GEOMAR

Forschungszentrum für Marine Geowissenschaften der  
Christian-Albrechts Universität zu Kiel,  
Wischhofstraße 1-3,  
Gebäude 8/C-112  
D - 24148 Kiel,  
Germany  
Tel: +49-431-600 2319 Fax: +49-431-600 2930  
Jürgen MIENERT  
E-mail: [jmienert@geomar.de](mailto:jmienert@geomar.de)

## Renard Centre of Marine Geology

Geology and Soil Sciences  
University of Gent  
Krijgslaan 281, S8  
B-9000 Gent, Belgium.  
Phone: +32-9-264 4585 Fax: +32-9-264 4967  
E-mail: [jeanpierre.henriet@rug.ac.be](mailto:jeanpierre.henriet@rug.ac.be)  
Jean-Pierre HENRIET

## Gent University

Marine Biology Section  
K.L. Ledeganckstraat 35  
B-9000 Gent, Belgium  
Tel: +32 92 64 5210 Fax: +32 92 64 5344  
Prof. Magda Vincx  
Email: [magda.vincx@rug.ac.be](mailto:magda.vincx@rug.ac.be)

## University of Göteborg

Department of Marine Geology,  
Faculty of Mathematics and Natural Sciences  
Box 7064  
S-40232 Göteborg, Sweden  
Phone: +46-31-773-4900 Fax: +46-31-773-4903  
E-Mail: [bjorn.malmgren@marine-geology.gu.se](mailto:bjorn.malmgren@marine-geology.gu.se)  
Bjorn A. MALMGREN

## Dept. of Analytical and Marine Chemistry

Chalmers University of Technology and University of Goteborg  
S-41296, Goteborg, Sweden  
Prof Per Hall [per@amc.chalmers.se](mailto:per@amc.chalmers.se)  
Tel : 00 46 31 7723623 Fax : 00 46 31 7722785  
Anders Tengberg [anders@amc.chalmers.se](mailto:anders@amc.chalmers.se)  
John Henrik Stahl [henrik@amc.chalmers.se](mailto:henrik@amc.chalmers.se)  
Jorge Valderrama [jvaldera@smhi.se](mailto:jvaldera@smhi.se)  
Stefan Hulth (has moved to the USA)

## GSI - Geological Survey of Ireland

Beggars Bush  
Haddington Road  
Dublin 4, Ireland  
Tel: +353 1 670 7444 Fax: +353 1 668 1782  
Dr Ray KEARY

LAMONT-DOHERTY Earth Observatory (LDEO)  
Columbia University  
P.O. Box 1000,  
61 Route 9W  
Palisades,  
New York 10964-1000  
USA  
Tel: +1 914 359 2000 Fax: +1 914 359 2931  
e-mail:

National Geophysical Data Centre (NGDC)  
NOAA E/GC3, 325 Broadway  
Boulder,  
Colorado 80303-3328  
USA  
Tel: +1 303 497 6339 Fax: +1 303 497 6513  
Carla Moore e-mail: cmoore@ngdc.noaa.gov

NERC - Natural Environmental Research Council  
British Geological Survey  
Marine Geology  
Murchison House,  
West Mains Road  
Edinburgh EH9 3LA,  
United Kingdom  
Phone: 44-131-667-1000 Fax: 44-131-668-4140  
E-Mail: dan.evans@bgs.ac.uk  
Dan EVANS

NIOZ Netherlands Institute for Sea Research  
P.O. Box 59  
1790 AB Den Burg, Texel  
The Netherlands  
Tel : +31 2220 69311 Fax : +31 2220 19674  
Dr Willem Helder texel@nioz.nl  
Dr Tjeerd van Weering duin@nioz.nl  
Dr Gerard Duineveld duin@nioz.nl  
Rob Witbaard witbaard@nioz.nl

University of Oslo  
Department of Geology  
PB 1047 Blindern  
N-0316 Oslo 3  
Norway  
Phone: 47-22-856653 Fax: 47-22-854215  
E-Mail: anders.elverhoi@geologi.uio.no  
Anders ELVERHOI

University of Plymouth  
Dept. of Environmental Science  
Drake Circus,  
Plymouth PL4 8AA, UK  
Tel: + 44 1 752 233103 Fax: + 44 1 752 233035  
Prof. S.J. Rowland  
Email S.Rowland@plymouth.ac.uk

Plymouth Marine Laboratory  
Prospect Place  
West Hoe  
Plymouth PL1 3DH UK  
Tel: +44 1752 633 100 Fax: +44 1752 633 101  
Dr I.R. Joint  
e-mail: enquiry@pml.ac.uk

Proudman Oceanographic Laboratory  
Bidston Observatory  
Birkenhead  
Merseyside, L43 7RA, UK  
Tel: +44 -151 653 8633 Fax: +44-151 653 6269  
J.M. Huthnance  
e-mail: jmh@pol.ac.uk or bodcmail@ua.nbi.ac.uk

Queens University Belfast  
School of Biology and Biochemistry  
Belfast BT9 7BL, UK  
Tel: +44 1 232 245133 Fax: +44 1 232 236505  
Dr. Dai Roberts  
Email: d.roberts@queens-belfast.ac.uk

Royal Holloway College  
Geology Department  
University of London  
Egham,  
Surrey TW20 0EX  
Tel: +44 1784 443 581 Fax: +44 1784 471 780  
Prof D.J. Blundell e-mail: blundell@rhnbc.ac.uk

Scripps Institution of Oceanography  
University of California  
8602 La Jolla Shores Drive  
La Jolla, California 92037  
Tel: +1 619 534 2830 Fax:  
e-mail: admin@sio.ucsd.edu

Southampton Oceanography Centre, European Way,  
Empress Dock, Southampton. SO14 3ZH. UK.  
Tel: +44 1703 595 000 Fax: +44 1703 595 000 Telex: 47121  
NERC Research Vessel Services:  
Peter Mason peter.j.mason@soc.soton.ac.uk  
John Wynar jbw@soc.soton.ac.uk  
Colin Day  
Howie Anderson  
Rhys Roberts

Tony .L. Rice (Co-ordinator of BENGAL project) e-mail: pht@soc.soton.ac.uk  
Tel: +44 1703 596 015 Fax: +44 1703 596 247  
David Billett E-mail: dsmb@soc.soton.ac.uk  
Brian Bett E-mail: bjb@soc.soton.ac.uk  
Andy Gooday E-mail: ang@soc.soton.ac.uk  
Secretary E-mail: Pam.Talbot@soc.soton.ac.uk  
Neil H. KENYON e-mail: nhk@soc.soton.ac.uk  
Tel: +44 1703 596 567

Texas A&M University (TAMU)  
ODP program office  
1000 Discovery Drive  
College Station  
Texas 77845-9547  
Tel: +1 409 845 2673 Fax: +1 409 845 4857  
e-mail:

University of Tromsø  
Institute of Biology and Geology  
Dramsveien 201  
N-9037 Tromsø  
Norway  
Phone: +47-7764-4394 Fax: +47-7764-5600  
E-Mail: [torev@ibg.uit.no](mailto:torev@ibg.uit.no)  
Tore O. VORREN

UNESCO/MSU Centre for Marine Geosciences  
Geology Facility,  
Moscow State University  
Vorobjevy Gory,  
119899 Moscow  
Russia  
Tel: +7 095 939 3022 Fax: +7 095 939 4917  
Dr Mikhail IVANOV e-mail: [main@fluns.geol.msu.su](mailto:main@fluns.geol.msu.su)

University College of Wales Aberystwyth  
Centre for Glaciology  
Institute of Earth Studies  
Dyfed SY23 3DB  
Wales, United Kingdom  
Phone: +44 970 622 781 / 622 581 Fax: +44 970 622 780  
E-Mail: [jud@aber.ac.uk](mailto:jud@aber.ac.uk)  
Julien Andrew DOWDESWELL

Woods Hole Oceanographic Institution (WHOI)  
Bell House, 221 Oyster Pond Road  
Woods Hole  
Massachusetts 02543-1531  
USA  
Tel: +1 508 457 2000 Fax: +1 508 457 2189  
e-mail: [information@whoi.edu](mailto:information@whoi.edu)

**LIST OF WEBSITES WITH DATA RELEVANT TO NE ATLANTIC MARINE  
RESEARCH**

- <http://www.nbi.ac.uk/bodc/bodcmain.html> British Oceanographic Data Centre
- <http://rock.esc.cam.ac.uk/pub.html> Earth Sciences Library, University of Cambridge
- <http://www.geophysics.dias.ie> DIAS Geophysics Group
- <http://www.nerc-oban.ac.uk/dml/home.htm> Dunstaffnage Marine Laboratory
- <http://www.soton.ac.uk/~imw/journals.htm> Geological Journals and Periodicals; Section of West's Geology Directory
- <http://www.liv.ac.uk/Geophysics/> Geophysics at the University of Liverpool
- <http://www.ifremer.fr> IFREMER
- <http://www.esc.cam.ac.uk/Library/Journals/BIRPS/birps.html> BIRPS, Cambridge
- <http://www.marine.ie/datacentre/projects/Bathymetry> Irish Marine Data Centre – Bathymetry
- <http://www.ncl.ac.uk/~nmscmweb/mscm/> MSCM Newcastle
- [http://www.ifm.uni-kiel.de/ph/sfb460/m39\\_ze/m39\\_ze.html](http://www.ifm.uni-kiel.de/ph/sfb460/m39_ze/m39_ze.html) METEOR Cruise 39-2
- <http://www-odp.tamu.edu> Ocean Drilling Program
- <http://www.ehis.navy.mil/onrnews.htm> ONR Newsletters
- <http://sio.ucsd.edu/> Scripps Institution of Oceanography
- <http://allserv.rug.ac.be/~mfaure/ttr7/> Renard Centre of Marine Geology, Ghent
- <http://www.ucc.ie/ucc/research/crc/> UCC Coastal Resources Centre
- <http://www.bgs.ac.uk/> BGS Home Page
- <http://www.nioz.nl/> NIOZ – Netherlands
- <http://seaweed.ucg.ie/mri/Introduction.html> UCG - Marine Science
- <http://www.mth.uea.ac.uk/ocean/vl/europe.html#ireland> Virtual Library Oceanography Europe
- <http://www.whoi.edu> Woods Hole Oceanographic Institution

<http://www.esc.cam.ac.uk/emin/home.html> European Marine Interdisciplinary Network

<http://www.npm.ac.uk/rsdas/omex/atlas/index.html> OMEX Hydrographic Atlas

<http://www.ukooa.co.uk/environment/index.html> UKOOA Environmental Issues

<http://geo.polymtl.ca/personel/xli/geophysics.html> Useful Geophysics Links

<http://www.getech.leeds.ac.uk> GETECH Leeds

<http://www.mth.uea.ac.uk/ocean/vl/europe.html#ireland> Oceanography Europe

<http://www.maris.nl/> Maris MARine Information Service

[http://www.ifremer.fr/sismer/sommaire\\_e.htql](http://www.ifremer.fr/sismer/sommaire_e.htql) SISMER Data Service

<http://www.geocities.com/SiliconValley/Peaks/6731/Journal.html> Journals of Earth Sciences

<http://europa.eu.int/comm/dg12/marine1.html> EU DGXII – Marine Science & Technology

<http://www.nbi.ac.uk/> Proudman Oceanographic Laboratory

<http://www.ices.dk/> ICES WWW Home Page

<http://www.geomar.de> GEOMAR, Kiel

<http://webhost1.cerf.net/journals/eps/jnl/articles/S0012821X96002282/Menu.html> Temperature anomalies under the NE Atlantic

<http://ioc.unesco.org/iyo> International Year of Oceanography - Home Page

<http://georef.cos.com/geofields.html#summary> GeoRef Database Text Fields

<http://www.nhm.ac.uk/mineralogy/collections/obd.htm> NHM Mineralogy, London

<http://www.ncdc.noaa.gov/coare/> COARE Data Info System

<http://www.ifm.uni-hamburg.de/> IfM Hamburg Homepage

<http://www.ifremer.fr/lpo/eurofloat/> The Eurofloat Project - Home Page

[http://www.ngdc.noaa.gov/mgg/gdas/gd\\_sys.html](http://www.ngdc.noaa.gov/mgg/gdas/gd_sys.html) NGDC-GEODAS Marine Geophysical Data

[http://janusexp.tamu.edu/predef\\_queries/general/dbtable.cgi](http://janusexp.tamu.edu/predef_queries/general/dbtable.cgi) ODP Database



<http://www.nerc-oban.ac.uk/cgi-bin/frame.pl?benbo/benbo.htm> Dunstaffnage Marine Laboratory Research Projects

<http://www.ldeo.columbia.edu/> Lamont Doherty Earth Observatory

<http://www-ocean.tamu.edu/Nav/research.html> Oceanography, Texas A&M University

<http://www.bsh.de/bsheng.htm> BSH Germany Marine Research Home Page

<http://diu.cms.udel.edu/ships/index.html> Research Ship Information and Schedules

<http://www1.npm.ac.uk/pml/home.htm> Plymouth Marine Laboratory

<http://www.soc.soton.ac.uk/RVS> Southampton Oceanography Centre

## STC Project No. 97/51

# Bibliography

Compiled By: Michael O'Neill, CSA

Work By: Martin Davies, CSAOG  
Malachy Carey, CSA  
Martin O'Neill, CSAOG  
Jason Hayes, CSA  
Vikram Unnithan, Geology Department,  
UCD  
Andrew Wheeler, Coastal Resources Centre,  
UCC

Additional Data: Southampton Oceanographic Centre, UK.  
Petroleum Affairs Division, Dept. of Marine  
and Natural Resources, Dublin.  
Fisheries Research Centre, Marine Institute,  
Dublin.

Approved

By: \_\_\_\_\_

Nick O'Neill

Abraham, D.A. and Ritchie, J.D. 1991. The Darwin Complex, a Tertiary igneous centre in the northern Rockall Trough. *Scottish Journal of Geology*, **27**, 113-125.

Ager, D.V. 1975. The Jurassic world ocean (with special reference to the North Atlantic). In: Finstad, K.G. and Selley, R.C. (Eds) *Jurassic Northern North Sea Symposium 1975*. Norwegian Petroleum Society, **JNNSS/2**, 1-24.

Ainsworth, N.R. 1990. Uppermost Rhaetian to Lower Bajocian Ostracoda from the Porcupine, Slyne, Erris and Donegal Basins, offshore west Ireland. *Geological Survey of Ireland Bulletin*, **4**, 169-200.

Ainsworth, N.R., Burnett, R.D. and Kontrovitz, M. 1990. Ostracod colour change by thermal alteration, offshore Ireland and western UK. *Marine and Petroleum Geology*, **7**, 3, 288-297.

Akhurst, M.A. 1991. British Geological Survey Technical Report, WB/91/2.

Akmetjanov, A., Van Weering, T.C.E., Kenyon, N.H. and Ivanov, M. 1997. Carbonate mounds and reefs on the Rockall Trough and Porcupine Margins. Abstract, second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.

Alastair Beach Associates 1995. North west European margin - structural atlas.

Alvinerie, J., Caralp, M., Latouche, C., Moyes, J. and Vigneaux, M. 1978. Contribution to the knowledge of the palaeohydrology of the North East Atlantic during the terminal Quaternary period. *Oceanologica Acta*, **1**, 1, 87-98.

Amoco Ireland Exploration Company. 1978. Rockall Basin, 19/5-1 (Well Completion report).

Andersen, M.S. 1988. Late Cretaceous and early Tertiary extension and volcanism around the Faeroe Islands. In: Morton, A.C. and Parson, L.M. (eds), *Early Tertiary Volcanism and the Opening of the NE Atlantic*. Geological Society, London, Special Publication, **39**, 115-122.

Andersen, M.S. and Boldreel, L.O. 1995. Tertiary compression structures in the Faeroe-Rockall area. In: Scrutton, R.A., Stoker, M.S., Shimmield, G.B. and Tudhope, A.W. (eds), *The Tectonics, Sedimentation and Palaeoceanography of the North Atlantic Region*. Geological Society, London, Special Publication, **90**, 215-216.

Andersen, M.S. and Boldreel, L.O. 1995. Effect of Eocene-Miocene compression structures on bottom-water currents in the Faeroe-Rockall area. In: Scrutton, R.A., Stoker, M.S., Shimmield, G.B. and Tudhope, A.W. (eds), *The Tectonics, Sedimentation and Palaeoceanography of the North Atlantic Region*. Geological Society, London, Special Publication, **90**, 141-143.

Andersen, M.S., Boldreel, L.O., Talwani, M., Sawyer, D., Ewing, J., Gunnarsson, C., Einarsson K. and McKenzie, K. 1989. Deep sediments under the Tertiary lava flows basin in the Hatton-Rockall Basin. *Terra Abstracts*, **1**, 2, p. 1.

Andersen, M.S., Boldreel, L.O., Gunnarsson, K., Kjartansson, E., Ewing, J., Talwani, M. and Sawyer, D. 1990. A seismic investigation of the Rockall Plateau. *Annales Geophysicae*, Special Issue, **63**.

Andersen, M.S., Egerton, P.D., Hitchen, K. and Bolreel, L. O., (in prep). Seismic facies analysis of volcanic successions offshore UK and the Faeroes.

Andersen, M.S., Waagstein, R., Kiorboe, L. and Boldreel, L.O. 1996. Late Cretaceous-Early Tertiary tectonics and volcanism around the Faeroe Islands. 58th EAGE Conference (Amsterdam, Netherlands, June 96) Extended Abstracts, Vol. **2**, Paper A020, 2 pp.

Andersson, C. and Jansen, E. 1996. Miocene intermediate water depth benthic foraminifera stable isotope records from ODP (Ocean Drilling Program) Site 982, Rockall Plateau, North Atlantic Ocean.

- AGU Fall Meeting (San Francisco, December 96) Poster Oc32a-27., EOS (Trans AGU) Vol. 77, 46 (Supplement), p. F305.
- Andrews, J.T., Jennings, A.E., Kerwin, M., Kirby, M., Manley, W., Miller, G.H., Bond, G. and Maclean, B. 1995. A Heinrich-like event, H-0 (DC-0); source(s) for detrital carbonate in the North Atlantic during the younger Dryas chronozone. *Palaeoceanography*, **10**, 943-952.
- Andrews, J.T. *et al.* 1996. Late Quaternary palaeoceanography of the North Atlantic margins. Geological Society, London, Special Publication, **111**, 376 pp.
- Anon. 1978. Hopes pinned on Porcupine and Donegal as Celtic Sea disappoints. *Offshore Engineering*, **9**, 51-54.
- Arkani-Hamed, J., Verhoef, J., Roest, W. and MacNab, R. 1996. The intermediate wavelength magnetic anomaly maps of the North Atlantic Ocean derived from satellite and shipborne data. *Oceanographic Literature Review*, **43**, p. 5.
- Armishaw, J.E., Holmes, R. and Stow, D.A.V. 1998. Sedimentation on the Hebridean Slope Apron and Borra Fan, NW UK Continental Margin. In: Stoker, M.S., Evans, D. and Cramp, A. (eds) Geological processes on continental margins: sedimentation, mass-wasting and stability. Geological Society London Special Publication, No. 129.
- Armour, A.R. and Bott, M.H.P. 1977. The Hebridean Margin Seismic Project of 1975. U.K. Geophysical Assembly, **49**, p 284.
- Armstrong, G. 1972. Review of the geology of the British Continental Shelf. *Mineralogical Engineering*, **131**, p 10.
- Ashcroft, B.A., Morgan, C.J. and Hurst, A. 1997. Reconciling gravity and seismic data in the Faeroe Basin, west of Shetland. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 125.
- Aubry, M.P., Berggren, W.A., Stott, L. and Sinha, A. 1996. The Upper Palaeocene-Lower Eocene stratigraphic record and the Palaeocene-Eocene Boundary carbon isotope excursion: Implications for geochronology. Correlation Of The Early Paleogene In Northwest Europe. Geological Society, London, Special Publication, **101**, 353-380.
- Auffret, G.A., Auzende, J.M., Cousin, M., Coutelle, A., Dobson, M., Geoghegan, M., Masson, D., Rolet, J. and Valliant, P. 1987. Geologie des escarpements de Porcupine et de Goban (NE Atlantique). Resultat de la Campagne de plongee CYAPORC. Note du Groupe CYAPORC. *Compte Rendue Academie Scientifique Paris*, 304, Serie **11**, 16, 1003-1008.
- Auffret, G.A. and the scientific team of SEDIFAN 1 and 2 IFREMER 1997. The Celtic Deep Sea Fan: preliminary results on architectural organisation, historical development and recent activity. Abstract, Second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- Auffret, G.A., Van Weering, T.C.E. and Sejrup, H.P. 1997. ENAM Cruise organisations. Abstract, second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- Aumento, F. *et al.* 1972. DSDP sites 116 & 117. In: Laughton, A.S., Berggren, W.A. *et al.* Initial reports of the deep sea drilling project, Vol. XII, Washinton (U.S. Government printing office).
- Auzende, J.M., Cousin, M., Coutelle, A., Dobson, M., Geoghegan, M., Masson, D., Rolet, J. and Vaillant, P. 1989. Stratigraphy of the scarps bounding the Porcupine Seabight: Preliminary results of the CYAPORC cruise (July August 1986). *Oceanologica Acta*, **12**, 117-131.
- Avery, O.E., Vogt, P.R. and Higgs, R.H. 1969. Morphology, magnetic anomalies and evolution of the Northeast Atlantic and Labrador Sea. Part 2, Magnetic anomalies. *Eos, Transactions, American Geophysical Union*, **50**, 4, pp. 184.

- Bach, I. 1975. Microfauna and stratigraphy in the Rockall area (North Atlantic): stratigraphic subdivisions of the late Pleistocene and Holocene on the basis of planktonic foraminifers. *Zeitschrift fuer Angewandte Geologie*, **21**, 584-592.
- Bach, I. 1982. Microfauna and stratigraphy in the Rockall district (N. Atlantic). Horizontal dissemination of some planktonic foraminifers in Holocene and Upper Quaternary. *Z. Angew. Geol.*, **28**, 6, 261-272.
- Backman, J. 1984. Cenozoic calcareous nannofossil biostratigraphy from the northeastern Atlantic Ocean - Deep Sea Drilling Project, 81. In: Roberts, D.G. and D. Schnitker, D. (eds), Initial Reports of the Deep Sea Drilling Project, **81**. US Government Printing Office, Washington DC, 403-428.
- Bäckström, D. 1997. Overview of palaeoceanographic studies of ENAM cores around the Faeroe Islands. Abstract, second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- Bailey, R.J. 1975. Sub-Cenozoic geology of the British continental margin (lat. 50°N to 57°N) and the re-assembly of the North Atlantic Late Palaeozoic supercontinent. *Geology*, **3**, 591-594.
- Bailey, R.J. 1975. The geology of the Irish continental margin and some comparisons with offshore eastern Canada. In: Yorath, C.J. (ed.), *Canada's Continental Margins and Offshore Petroleum Exploration*. Canadian Society of Petroleum Geologists, Memoir, **4**, 313-340.
- Bailey, R.J. 1978. The continental margin west of the British Isles. *Journal of the Geological Society*, London, **135**(4), p. 465.
- Bailey, R.J. 1979. The continental margin from 50°N to 57°N: its geology and development. In: Banner, F.T., Collins, M.B. and Massie, K.S. (eds), *The North West European Shelf Seas: the sea and sea bed in Motion 1. Geology and Sedimentology*, Elsevier, Amsterdam, 11-24.
- Bailey, N.J.L., Walko, P. and Sauer, M.J. 1987. Geochemistry and source rock potential of the west of Shetlands. In: Brooks, J. and Glennie, K. (eds), *Petroleum Geology of North West Europe*. Graham and Trotman, London, 711-721.
- Bailey, R.J. and Clarke, R.H. 1969. Report of the Prince Madoc Cruise No. 20/69. University College of North Wales (U.C.N.W.) Marine Science Labs, Geological Report No. **69-2**.
- Bailey, R.J. and Haynes, J.R. 1974. New dredge samples from the continental margin bordering Rockall Trough. *Marine Geology*, **16**, 57-62.
- Bailey, R.J., Grazywacz, J.M. and Buckley, J.S. 1974. Seismic reflection profiles of the continental margin bordering the Rockall Trough. *Journal of the Geological Society*, London, **130**, 55-69.
- Bailey, R.J., Buckley, J.S. and Clarke, R.H. 1971. A model for the early evolution of the Irish continental margin. *Earth and Planetary Science Letters*, **13**, 79-84.
- Bailey, R.J., Buckley, J.S. and Kielmas, M.M. 1975. Geomagnetic reconnaissance of the continental margin of the British Isles between 54° and 57°N. *Journal of the Geological Society*, London, **131**, 275-282.
- Bailey, R.J., Grzywacz, J.M. and Buckley, J.S. 1974. Seismic reflection profiles of the continental margin bordering the Rockall Trough. *Journal of the Geological Society*, London, **130**, 55-69.
- Bailey, R.J., Jackson, P.D. and Bennell, J.D. 1977. Marine geology of Slyne Ridge. *Journal of the Geological Society*, London, **133**, 165-172.

Baldauf, J.G. 1984. Diatom biostratigraphic and palaeoceanographic interpretations for the middle to high latitude North Atlantic Ocean. Geological Society, London, Special Publication, **21**.

Baldauf, J.G. 1984. Cenozoic diatom biostratigraphy and paleoceanography of the Rockall Plateau region, North Atlantic, DSDP Leg 81. Initial reports of the Deep Sea Drilling Project, **81**. US Government Printing Office, Washington DC, 653-661.

Baldauf, J.G. 1987. Biostratigraphic and palaeoceanographic interpretation of Lower and Middle Miocene sediments, Rockall Plateau Region, North Atlantic Ocean (DSDP, Leg 94). Initial reports of the Deep Sea Drilling Project, **94**, Part 2. US Government Printing Office, Washington DC, 1033-1043.

Baldauf, J.G. 1987. Diatom biostratigraphy of the middle and high latitude North Atlantic Ocean, Deep Sea Drilling Project, Leg 94. In: Ruddiman, W.F and Kidd, R.B. (eds), Initial Reports of the Deep Sea Drilling Project, **94**. US Government Printing Office, Washington DC, 729-762.

Baldauf, J.G., Thomas, E., Clement, B., Takayama, T., Weaver, P.P.E., Backman, J., Jenkins, G., Mudie, P.J. and Westberg-Smith, M.J. 1997. Magnetostratigraphic and biostratigraphic analysis, Deep Sea Drilling Project Leg 94. In: W.F. Ruddiman and R.B. Kidd (eds), Initial reports of the Deep Sea Drilling Project, Vol. **94** (pp.1159-1206).

Baltzer, A., Holmes, R. and Evans, D. 1998. Debris flows on the Sula Sgeir Fan, north-west Scotland. In: Stoker, M.S., Evans, D. and Cramp, A. (eds) Geological processes on continental margins: sedimentation, mass-wasting and stability. Geological Society London Special Publication, No. 129.

Bamford, S.A.D. 1972. Evidence for a low velocity zone in the crust beneath the Western British Isles. Geophysical Journal of the Royal Astronomical Society, **30**, 101-105.

Bard, E., Arnold, M., Mangerud, J., Paterne, M., Labeyrie, L., Duprat, J., Mélières, M.A., Sønstegaard, S. and Duplessy, J.C. 1994. The North Atlantic atmosphere-sea surface  $^{14}\text{C}$  gradient during the Younger Dryas climatic event. Earth and Planetary Science Letters, **126**, 275-287.

Barton, A.J. and White, R.S. 1995. The Edoras Bank margin: continental break-up in the presence of mantle plume. Journal of the Geological Society, London, Vol. **152**, 971-974.

Barton, A.J and White, R.S. 1997. Volcanism on the Rockall continental margin. Journal of the Geological Society, London, **154**, 531-536.

Barton, P.J., Hughes, S., Zelt, C. and Masotti, R. 1997. Exploring the Shetlands-Faeroes Basin using wide-angle seismic technology. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 223.

Bayley, R.J. 1975. The geology of the Irish continental margin and some comparisons with offshore eastern Canada. In: Yorath, C.J. (ed), Canada continental margins and offshore petroleum exploration. Canadian Society of Petroleum Geology, Memoir **4**, 313-340.

Bean, C.J., Jacob, B., Makris, J., Liebe, T. and Shannon, P.M. 1989. Offshore seismic studies west of Ireland. European Association of Exploration Geophysicists. 51st. Annual Meeting, Berlin, Abstracts, p. 51.

Beaufort, L. and Aubry, M.P. 1990. Fluctuations in the composition of late Miocene calcareous nannofossil assemblages as a response to orbital forcing. Paleoceanography, **5**, 6, 845-865.

Belderson, R.H. and Kenyon, N.H. 1976. Long-range sonar views of submarine canyons. Marine Geology, **22**, 69-74.

Belderson, R.H., Kenyon, N.H. and Stride, A.H. 1970. Holocene sediments on the Continental Shelf west of the British Isles. In: Delany, F.M. (ed), Institute of Geological Sciences Report No. **70/14**, The Geology of the East Atlantic Continental Margin, 159-170.

- Belderson, R.H., Kenyon, N.H. and Wilson, J.B. 1973. Iceberg ploughmarks in the Northeast Atlantic. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **13**, 215-224.
- Belderson, R.H., Kenyon, N.H. and Wilson, J.B. 1985. The exploration of the British continental shelf with side-scan sonar, television and photography. Institute of Oceanographic Sciences, Annual Report 1984, 70-75.
- Bell, B.R. and Emeleus, C.H. 1988. A review of silicic pyroclastic rocks of the British Tertiary Volcanic Province. 365-379. In: Morton, A.C. and Parson, L.M. (eds). *Early Tertiary Volcanism and the Opening of the NE Atlantic*. Geological Society London Special Publication, No. 39.
- Bell, B.R. and Jolley, D.W. 1997. Application of palynological data to the Palaeogene lava fields of the British Province: implications for magmatic stratigraphy. *Journal of the Geological Society, London*, Vol. **154**, 701-708.
- Bentley, P.A.D. 1986. Geophysical studies in southern and central Rockall Trough, north-east Atlantic. PhD thesis, Edinburgh University.
- Bentley, P.A.D. and Scrutton, R.A. 1987. Seismic investigations into the basement structure of southern Rockall Trough. In: Brooks, J. and Glennie, K. (eds), *Petroleum Geology of North West Europe*. Graham and Trotman, London, 667-675.
- Berggren, W.A. and Schnitker, D. 1983. Cenozoic marine environments in the North Atlantic and Norwegian-Greenland Sea. In: Bott, M.H.P., Saxov, S., Talwani, M. and Thiede, J. (eds), *Structure and development of the Greenland-Scotland Ridge*. Plenum Press, New York, 495-548.
- Berthois, L. and Brenot, R. 1966. Existence d'une flexure continentale parcourue par un reseau hydrographique, au Sud-Ouest de l'Irlande. *Compte Rendue Academie Scientifique Paris, Series D*, **263**, 1297-1299.
- Bertram, C.J., Elderfield, H., Shackelton, N.J. and MacDonald, J.A. 1995. Cadmium/calcium and carbon isotope reconstructions of the glacial northeast Atlantic Ocean. *Palaeoceanography*, **10**, 563-578.
- BIRPS and ECORS. 1989. Crustal structure of the Goban Spur continental margin, Northeast Atlantic, from deep seismic profiling. *Journal of the Geological Society, London*, **146**, 427-437.
- Bjørklund, K.R. 1976. Radiolaria from the Norwegian Sea, Leg 38 of the Deep Sea Drilling Project. In Talwani, M. and Udintsev, G. (eds), *Initial Reports of the Deep Sea Drilling Project*, Vol. **38**, pp.1101-1168 (Washington, U.S. Government Printing Office).
- Blanc, P.L., Fontugne, M.R. and Duplessy, J.C. 1983. The time-transgressive initiation of boreal ice-caps; continental and oceanic evidence reconciled. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **42**, 211-224.
- Boldreel, L.O. and Anderson, M.S. 1993. Late Palaeocene to Miocene compression in the Faeroe-Rockall area. In: Parker, J.R. (ed), *Petroleum Geology of Northwest Europe: Proceedings of the 4th Conference*. Geological Society, London, Special Publication, 2 vols., 1025-1034.
- Boldreel, L.O. and Andersen, M.S. 1994. Tertiary development of the Faeroe-Rockall Plateau based on reflection seismic data. *Bulletin of the Geological Society of Denmark*, **41**, 162-180.
- Boldreel, L.O. and Andersen, M.S. 1995. The relationship between the distribution of Tertiary sediments, tectonic processes and deep water circulation around the Faeroe Islands. In: Scrutton, R.A., Stoker, M.S., Shimmield, G.B. and Tudhope, A.W. (eds), *The Tectonics, Sedimentation and Palaeoceanography of the North Atlantic region*. Geological Society, London, Special Publication, **90**, 145-158.

- Boldreel, L.O., Andersen, M.S., Kiorboe, L. and Hoy, T. 1992. New High-Resolution Marine Seismic Data in the Faeroe-Rockall area. *Journal of Applied Geophysics*, **29**, 1, 77-78.
- Boldy, S.A.R. 1995. Permian and Triassic rifting in Northwest Europe. Geological Society, London, Special Publication, **91**, 263 pp.
- Bond, G. and Lotti, R. 1995. Iceberg discharges into the North Atlantic on millennial time scales during the last glaciation. *Science*, **267**, 1005-1010.
- Bond, G., Broecker, W.S., Johnsen, S.J., McManus, J., Labeyrie, L., Jouzel, J. and Bonani, G. 1993. Correlations between climate records from North Atlantic sediments and Greenland ice. *Nature*, **365**, 143-147.
- Bott, M.H.P. 1975. Structure and evolution of the North Scottish Shelf, the Faroe Block and the intervening region. In: Woodland, A.W. (ed) Petroleum and the continental shelf of North West Europe, Applied Science Publishers, **1**, 105-115.
- Bott, M.H.P. 1978. The origin and development of the continental margin between the British Isles and SE Greenland. Geological Society, London, Special Publication, **10**, 377-392.
- Bott, M.H.P. and Smith, P.J. 1984. Crustal structure of the Faeroe-Shetland Channel. *Geophysical Journal of the Royal Astronomical Society*, Vol. **76**, 383-398.
- Bott, M.H.P. and Tantrigoda, D.A. 1987. Interpretation of the gravity and magnetic anomalies over the Mull Tertiary intrusive complex, NW Scotland. *Journal of the Geological Society, London*, Vol. **144**, 17-28.
- Bott, M.H.P. and Watts, A.B. 1970. Deep structure of the continental margin adjacent to the British Isles. In: Delaney, F.M. (ed) Institute of Geological Sciences Report No. **70/14**, The Geology of the East Atlantic Continental Margin, 93-109.
- Bott, M.H.P., Armour, A.R., Himsworth, E.M., Murphy, T., Wylie, G. and Keen, C.E. 1979. An explosion seismology investigation of the continental margin west of the Hebrides, Scotland, at 58°N, Crustal properties across passive margins. *Tectonophysics*, **59**, 217-231.
- Bott, M.H.P., Smith, P.J. and Uruski, C.I. 1982. Crustal structure of the Wyville-Thomson Ridge and the Faeroe-Shetland Channel. *Eos, Transactions, American Geophysical Union*, **63**, 51, 1276-1277.
- Boulter, M.C. and Manum, S.B. 1989. The Brito-Arctic Igneous Province flora around the Palaeocene/Eocene Boundary (ODP Leg 104). *Proceedings of the Ocean Drilling Program: Initial Reports*, **104**, 663-680.
- Boyle, E.A. and Keigwin, L. 1987. North Atlantic thermo-haline circulation during the past 20,000 years linked to high latitude surface temperature. *Nature*, **330**, 3540.
- BP Petroleum Development Ltd. Irish Branch. 1979. Ireland: Porcupine Basin wells 26/22-1 and 26/22-1A, completion report.
- BP Petroleum Development Ltd. Irish Branch. 1988. Ireland: Porcupine Basin well 43/13-1, geological completion report.
- BP Research Centre. 1979. A geochemical study of the BP/Aran well 26/ 22-1/1A, Porcupine Basin, offshore Ireland.
- BP Research Centre. 1988. Well 43/13-1, Porcupine Basin, offshore Ireland: a geochemical study.
- Brewer, J.A., Matthews, D.H., Warner, M.R., Hall, J., Smythe, D.K. and Whittington, R.J. 1983. BIRPS deep seismic reflection studies of the British Caledonides. *Nature*, **305**, 206-210.



British Geological Survey. 1987. Sea bed sediments around the United Kingdom (North Sheet) 1:1,000,000.

British Geological Survey 1997. Rockall continental margin project.

Brock, A., Ryan, P.D. and Shannon, P.M. 1991. The deep geology and geophysics of Ireland and its continental margin. *Journal of the Geological Society, London*, **148**, 129-30.

Brodie, J. and White, N. 1994. Sedimentary basin inversion caused by igneous underplating: Northwest European continental shelf. *Geology*, **22**, 147-150.

Brooks, J. and Fleet, A.J. 1987. Marine Petroleum Source Rocks. Geological Society, London, Special Publication, **26**.

Brooks, J. and Glennie, K. 1987. Petroleum Geology of North West Europe (2 vols.). Graham and Trotman, London.

Brown, S. and Downie, C. 1984. Dinoflagellate cyst biostratigraphy of late Palaeocene and early Eocene sediments from holes 552, 553A and 555, Leg 81, Deep Sea Drilling Project (Rockall Plateau). In: Roberts, D. G., Schnitker, D., *et al.* Initial reports of the Deep Sea Drilling Project, Vol. 81: Washington(U. S. Government printing office).

Bruck, P. 1986. Sedimentology and micropalaeontology of gravity cores from the NE Atlantic Ocean (south west of Ireland). Technical Report - Marine Geoscience Unit, Joint Geological Survey/University of Cape Town, **16**, 106-112.

Bryden, H.L. 1997. Meeting report for "Workshop on North Atlantic variability", 5-6 december 1996, Southampton Oceanographic Centre, 5pp., [www.ehis.navy.mil/confsu14.htm](http://www.ehis.navy.mil/confsu14.htm).

Buck, P. 1986. Sedimentology and micropalaeontology of gravity cores from the NE Atlantic Ocean (South West Ireland). University of Cape Town, Marine Geoscience Unit, Technical Report, **16**, 106-112 & figs.

Buckley, J.S. and Bailey, R.J. 1975. Geophysical evidence on the nature of the Hebrides Terrace Seamount. *Scottish Journal of Geology*, **111**, 37-45.

Buckley, J.S. and Bailey, R.J. 1975. A free-air gravity anomaly contour map of the Irish continental margin. *Marine Geophysical Research*, **2**, 185-194.

Bugge, T. and Gading, M. 1994. Shallow stratigraphic drilling in the Erris and Slyne Troughs, '86. "The Petroleum Geology of Ireland's Offshore Basins" conference, Dublin, 21-22 April, 1994 - expanded abstracts.

Bukry, D. 1984. Cenozoic silicoflagellates from Rockall Plateau, Deep Sea Drilling Project Leg 81. In: Roberts, D. G., Schnitker, D., *et al.* Initial reports of the Deep Sea Drilling Project, Vol. 81: Washington(U. S. Government printing office).

Bull, J.M. and Masson, D.G. 1996. The southern margin of the Rockall Plateau: Stratigraphy, Tertiary volcanism and plate tectonic evolution. *Journal of the Geological Society, London*, **153**, 601-612.

Bunce, E.T., Crampin, S., Heresey, J.B. and Hill, M.N. 1964. Seismic refraction observations on the continental boundary west of Britain. *Journal of Geophysical Research*, **69**, 3853-3863.

Bunch, A.W.H. 1979. A detailed structure of Rockall Bank (55°N, 15°W) - a synthetic seismogram analysis. *Earth and Planetary Science Letters*, **45**, 453-463.

Butterworth, P., Hertig, S., Holba, A., Hughes, W. and Atkinson, C. 1997. Jurassic non-marine source and reservoir facies in the Porcupine Basin: implications for petroleum systems development along the

Atlantic Margin. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 93.

Chalmers, J.A., Larsen, L.M. and Pedersen, A.K. 1995. Widespread Palaeocene volcanism around the northern North Atlantic and Labrador Sea: evidence for a large, hot, early plume head. *Journal of the Geological Society, London*, Vol. **152**, 965-970.

Chamley, H., Debrabant, P., Foulon, J. and Maillot, H. 1978. Mineralogy and geochemistry of the secondary and Cenozoic sediments of the north east Atlantic margin (Legs 47B, 48, 50, DSDP). *Bull. Soc. Geol. Fr.*, **20**, 4, 401-410.

Chapman, M.R. and Shackleton, N.J. 1997. Sub-Milankovitch fluctuations in North Atlantic latitudinal heat flux during the last 150,000 years [67/4B37]. *Terra Abstracts*, **9**, 1, p. 612.

Chapman, M.R., Shackleton, N.J., Zhao, M. and Eglinton, G. 1996. Faunal and alkenone reconstructions of subtropical North Atlantic surface hydrography and paleotemperature over the last 28 kyr. *Palaeoceanography*, **11**, 343-357.

Chapman, M.R., Funnell, B.M. and Weaver, P.P.E. 1996. High resolution Pliocene planktonic foraminiferal biozonation of the tropical North Atlantic. In: Mokuilevsky, A. and Whatley, R. (eds), *Microfossils and oceanic environments*. University of Wales Press, Aberystwyth, 307-316.

Chapman, M.R. and Shackleton, N.J. 1998. Millennial scale sea surface variability in the NE Atlantic during the last glacial-interglacial cycle. Abstract, *Geoscience 1998*, 14-18 April 1998, Keele University.

Chapman, T.J., Broks, T.M., Corcoran, D.V., Duncan, L.A. and Dancer, P.N. 1997. The structural evolution of the Erris Trough, North West Ireland with implications for hydrocarbon generation. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 79.

Charisi, S.D. and Schmitz, B. 1996. Early Eocene palaeoceanography and palaeoclimatology of the Eastern North Atlantic: Stable isotope results for DSDP (Deep Sea Drilling Project) hole 550. In: Knox, R.W.O.B., Corfield, R.M. and Dunay, R.E. (eds), *Correlation Of The Early Paleogene In Northwest Europe*. Geological Society, London, Special Publication, **101**, 457-472.

Chessell, J., Thomas, C., Norvick, M. and Mitchelmore, L. 1997. The Porcupine Basin; Ireland's missed oil province? *American Association of Petroleum Geologists Bulletin*, **81**, p. 8.

Christie-Blick, N., Mountain, G.S. and Miller, K.G. 1990. Seismic stratigraphic record of sea-level change. 116-140 in *Sea-level Change*. (National Academy of Science Studies in Geophysics).

Choignard, J. and Ducastaing, M. 1982. Offshore Ireland, Slyne Trough 27/13-1 Geological report. SNEA(P) Direction Exploration, Laboratoire de Geologie de Bousseus, GEO/LAB BSS 2/2309 RP/Lg.

Clark, J.D., Pickering, K.T. and Kenyon, N.H. 1992. Quantitative analysis of the geometry of submarine channels: implications for the classification of submarine fans. *Geology*, **20**, 7, 633-636.

Clarke, R.H., Bailey, R.J. and Taylor Smith, D. 1971. Seismic reflection profiles of the continental margin west of Ireland. In: Delany, F.M. (ed), *The Geology of the East Atlantic Continental Margin*. Institute of Geological Science Report, **70/14**, 67-76.

Clement, B.M. and Robinson, F. 1987. The magnetostratigraphy of Leg 94 sediments. In: Ruddiman, W.F. and Kidd, E.B. (eds), *Initial Reports of the Deep Sea Drilling Project*, Vol. **94**, pp. 635-650, Washington (U.S. Government Printing Office).

Clift, P.D. 1995. Subsidence analysis of the East Greenland continental margin and implications for rift and plume tectonics of the Northeast Atlantic. 29th Annual GSA N-Central & S-Central Section *et al.* Meeting (Lincoln, NE, 4/27-28/95), Paper 28660, Abstract with Programs (GSA), **27**, 3, p. 43.

Clift, P.D. 1996. Temperature anomalies under the Northeast Atlantic rifted volcanic margins. *Earth and Planetary Science Letters*.  
[Webhost1.cerf.net/journals/epsl/jnl/articles/S0012821X96002282/Menu.html](http://Webhost1.cerf.net/journals/epsl/jnl/articles/S0012821X96002282/Menu.html)

Clift, P.D. 1997. Palaeocene igneous underplating and the thermal evolution of the Rockall Trough; implications for source rock maturation. *Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Palaeontologists and Mineralogists*, **6**, 21 pp.

Clift, P.D. and Turner, J. 1997. The nature and thermal impact of igneous underplating in the Rockall-Faeroe-Shetland region. In: *5th Conference on Petroleum Geology of NW Europe*. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 129.

Clift, P.D., Turner, J. and Hutton, D.H.W. 1994. Dynamic support by the Iceland Plume and its influence on the evolution of the NE Atlantic. *Journal of the Geological Society, London*, **152**, 935-941.

Clift, P.D., Turner, J. and The ODP Leg 152 Scientific Party. 1995. Dynamic support by the Iceland plume and its effect on the subsidence of the north Atlantic margins. *Journal of the Geological Society, London, Vol. 152*, 935-942.

Clift, P.D., Turner, J. and ODP Leg 152 Science Party. 1995. Dynamic support by the Icelandic Plume and vertical tectonics of the Northeast Atlantic continental margins. *Journal of Geophysical Research*, **100**, 24, 473-24, 486.

Clift, R.A. and Rex, D.C. 1989. Evidence for a Grenville event in the Lewisian of the northern Outer Hebrides. *Journal of the Geological Society, London*, **146**, 921-924.

Cloetingh, S., Gradstein, F.M., Kooi, H., Grant, A.C. and Kaminski, M. 1990. Plate re-organisation: a cause of rapid late Neogene subsidence and sedimentation around the North Atlantic? *Journal of the Geological Society, London*, **147**, 495-506.

Cochran, J.R. and Talwani, M. 1978. Gravity anomalies, regional elevation and the deep structure of the North Atlantic. *Journal of Geophysical Research*, **83**, 4907-4924.

Cole, G.A.J. 1922. Some features of the Armorican (Hercynian) folding in southern Ireland. *Report of the International Geological Congress, XII, (Belgium)*, 423-433.

Cole, G.A.J. and Crook, T. 1910. On rock specimens dredged from the floor of the Atlantic off the coast of Ireland and their bearing on submarine geology. *Memoir of the Geological Survey of Ireland*.

Cole, J. and Peachey, J. 1997. Evidence for Pre-Cretaceous rifting in the Rockall Trough: A quantitative analysis using plate tectonic modelling. In: *5th Conference on Petroleum Geology of NW Europe*. Barbican Centre, London, 26-29 October, 1997. Abstract, 69-71.

Coles, G.P., Ainsworth, N.R., Whatley, R.C. and Jones, R.W. 1996. Foraminifera and Ostracoda from Quaternary carbonate mounds associated with gas seepage in the Porcupine Basin, offshore western Ireland. *Revista Espanola de Micropaleontologia*, **28**, 113-151.

Colin, J-P., Ioannides, N.S. and Vining, B. 1992. Mesozoic stratigraphy of the Goban Spur, offshore southwest Ireland. *Marine and Petroleum Geology*, **9**, 527-542.

Collette, B.J. and Lagaay, R.A. 1967. A continuous seismic section across the continental slope off Ireland. *Marine Geology*, **5**, 155-157.

Conroy, J.J. 1989. Marine geophysical investigations on the continental margin, west of Ireland. PhD thesis, University College Galway.

Conroy, J.J. and Brock, A. 1989. Gravity and magnetic studies of crustal structure across the Porcupine Basin west of Ireland. *Earth and Planetary Science Letters*, **93**, 371-376.

- Cook, D.R. 1987. The Goban Spur - exploration in a deep-water frontier basin. In: Brooks, J. and Glennie, K. (eds), *Petroleum Geology of North West Europe*. Graham and Trotman, London, 623-632.
- Cook, D.R. 1988. Exploration on the Goban Spur; a plateau on the continental margin, southwest of Ireland. *Proceedings - Offshore Technology Conference*, **20**, 2, 431-439.
- Cooper, M.M., Evans, A.C., Lynch, D.J., Neville, G. and Newley, T. 1997. The Foinaven Field: managing reservoir development uncertainty prior to start-up. In: *5th Conference on Petroleum Geology of NW Europe*. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 113.
- Copley, M. PhD in progress. Magnetic and seismic studies in the Porcupine Basin. University College Galway, Applied Geophysics Unit.
- Corfield, S., Croker, P., Footitt, R., Murphy, H. and Parker, S. 1996. The petroleum geology of the Rockall Trough, Irish Sector. *PESGB Newsletter*, 6-8. November 1996 issue.
- Corfield, S., Murphy, N. and Parker, S. 1997. The structural and stratigraphic framework of the Irish Rockall Trough. In: *5th Conference on Petroleum Geology of NW Europe*. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 63.
- Correig, A.M. 1975. Structure of the crust of the Porcupine Zone, coast of Ireland. In: *1st asamblea nacional de geodesia y geofísica*, Diciembre 16-19, 1974, Madrid; comunicaciones, 351-357.
- Cortijo, E., Labeyrie, L., Vidal, L., Vautravers, M., Chapman, M.R., Duplessy, J-C., Elliot, M., Arnold, M. and Auffret, G. 1997. Modifications to sea surface hydrology associated with Heinrich event 4 in the North Atlantic Ocean (40-600N). *Earth and Planetary Science Letters*, **146**, 29-45.
- Costa, L.I. and Downie, C. 1976. The distribution of the dinoflagellate cyst. *Wetzeliella* in the Palaeogene of northwestern Europe. *Palaeontology*, Vol. **19**, 591-614.
- Costa, L.I. and Muller, C. 1978. Correlation of Cenozoic dinoflagellate and nannoplankton zones from the NE Atlantic and NW Europe. *Newsl. Stratigr.*, **7**, 2, 65-72.
- Courtois, C., Chamley, H. and Millot, M.G. 1978. Rare earth elements and clay minerals in the Cretaceous and Cenozoic sediments from the Eastern Atlantic margins. *Compte Rendue Hebd. Seances Academie Scientifique, Paris, Series D*, **286**, 9, 671-674.
- Coward, M.P. 1990. The Pre-Cambrian, Caledonian and Variscan framework to NW Europe. In: Hardman, R.F.P. and Brooks, J. (eds), *Tectonic events responsible for Britain's oil and gas reserves*. Geological Society, London, Special Publication, **55**, 1-34.
- Cremer, M., Faugeres, J.M. and Poutiers, J. 1982. Les glacis continentaux de marge stable; morphologie et dynamique sedimentaire, evolution au Quaternaire recent. *Bulletin de la Societe Geologique de France*, **24**, 433-446.
- Cremer, M., Faugeres, J.C., Grousset, F. and Gonthier, E. 1993. Late Quaternary sediment flux on sediment drifts in the Northeast Atlantic. *Sedimentary Geology*, **82**, 89-101.
- Cresswell, J. 1996. Mobil plans to go deeper and deeper. *Petroleum Review*, **50**, 588, 30-32.
- Croker, P.F. 1990. Geophysical and structural analysis of the Erris Trough, offshore NW Ireland. Paper presented at the Conference on Basins on the North West Seaboard, Belfast, 25-26 September, 1990.
- Croker, P.F. 1992. The Goban-Cockburn Fault Zone - a major crustal feature. Unpublished Abstract Annual Irish Geological Research Meeting, T.C.D., February, 1992.

- Croker, P.F. 1994. The Clare Basin - a geological and geophysical outline. In: The Petroleum Geology of Ireland's Offshore Basins, Dublin, Ireland. (Abstract)
- Croker, P.F. 1995. The Clare Basin: a geological and geophysical outline. In: P. F. Croker and P. M. Shannon (eds), The Petroleum Geology Of Ireland's Offshore Basins. Geological Society, London, Special Publication, **93**, 327-339.
- Croker, P.F. and Klemperer, S.L. 1989. Structure and stratigraphy of the Porcupine Basin: relationships to deep crustal structure and the opening of the North Atlantic. In: Tankard, A.J. and Balkwill, H.R. (eds), Extensional tectonics and stratigraphy of the North Atlantic margins. American Association of Petroleum Geologists Memoir, **46**, 445-459.
- Croker, P.F. and Shannon, P.M. 1987. The evolution and hydrocarbon prospectivity of the Porcupine Basin, Offshore Ireland. In: Brooks, J. and Glennie, K.W. (eds), Petroleum geology of Northwest Europe, vol. **2**, Graham and Trotman, London, 633-642.
- Croker, P.F. and Shannon, P.M. 1987. The Porcupine Basin Report. Petroleum Affairs Division, Department of Energy, Dublin, Ireland. **1 & 2**, p 110.
- Croker, P.F. and Shannon, P.M. (eds) 1995. The Petroleum Geology of Ireland's Offshore Basins. Geological Society, London, Special Publication, **93**, p 504.
- Croker, P.F. and Shannon, P.M. 1995. The petroleum geology of Ireland's offshore basins: introduction. In: P. F. Croker and P. M. Shannon (eds), The Petroleum Geology of Ireland's Offshore Basins. Geological Society, London, Special Publication, **93**, 1-8.
- Cunningham, G.A. and Shannon, P.M. 1996. Structural development and basin modelling of the Slyne and Erris basins, offshore Ireland. 58th EAGE Conference (Amsterdam, Netherlands, June 96) Extended Abstracts, **2**, p. 562.
- Cunningham, G.A. and Shannon, P.M. 1996. The Erris Ridge - a key to understanding the evolution of the NW Irish Offshore Basins. In: Tectonic, Magmatic and Depositional Processes at Passive Continental Margins. Abstract, Geological Society, Norwegian Geological Society and Norwegian Petroleum Society meeting, London.
- Cunningham, G.A. and Shannon, P.M. 1997. The Erris Ridge: a major geological feature in the NW Irish Offshore Basins. Journal of the Geological Society, London, **154**, 503-508.
- Cunningham, G.A. and Shannon, P.M. 1997. Basin Development of the Southern Erris Trough, offshore Ireland. Abstracts, Annual Irish Geological Research Meeting, Queen's University of Belfast, **9**.
- Curry, J.R., Moore, D.G., Belderson, R.H. and Stride, A.H. 1966. Continental margin of Western Europe, slope progradation and erosion. Science, **154**, 265-266.
- Dafter, R. 1981. Irish Oil Prospects. Much depends on Porcupine. Financial Times 12<sup>th</sup> January.
- Daly, J.S. 1990. Late mid-Proterozoic crustal growth in the North Atlantic region. Geological Society of Australia, Abstracts, **27**, p. 23.
- Daly, J.S. 1992. Proterozoic crust in Britain and Ireland and the adjacent continental shelf: implications for Trans-Atlantic correlation. Spring Meeting Supplement. Eos, Transactions, American Geophysical Union, **73**, 14, p. 340.
- Daly, J.S., Fitzgerald, R.C., Brewer, T.S., Menuge, J.F., Heaman, L.M. and Morton, A.C. 1994. Persistent geometry of Palaeoproterozoic juvenile crust on the southern margin of Laurentia-Baltica: Evidence from Ireland and Rockall Bank. IGCP Proj 275/371. Precambrian crustal evolution in the North Atlantic Region Meeting (Nottingham, UK, September 94) Paper 15, Terra Abstracts, Supplement 2 to Terra Nova, **6**, p. 5.

Daly, J.S., Heaman, L.M., Fitzgerald, R.C., Menuge, J.F. and Morton, A.C. 1994. Geochronological and isotopic constraints on the age and crustal evolution of the crystalline basement in Western Ireland and Rockall. *Proceedings of the Petroleum Geology of Ireland's Offshore Basins Conference*, 56-57.

Daly, J.S., Heaman, L.M., Fitzgerald, R.C., Menuge, J.F., Brewer, T.S. and Morton, A.C. 1995. Geochronological and isotopic constraints on the age and crustal evolution of crystalline basement in Western Ireland and Rockall. In: Croker, P.F. and Shannon, P.M (eds), *The petroleum geology of Ireland's offshore basins*. Geological Society, London, Special Publication, **93**, 433-435.

Dalziel, W.D. 1994. Precambrian Scotland as a Laurentia - Gondwana link: Origin and significance of cratonic promontories. *Geology*, **22**, 589-592.

Damassa, S.P., Goodman, D.K., Kidson, E. J. and Williams, G.L. 1988. Correlation of Paleogene dinoflagellate assemblages to standard nannofossil zonation in North Atlantic DSDP (Deep Sea Drilling Project) sites. 7th International Palynological Congress (Brisbane, Australia, 8/29/88-9/3/88) Papers, *Rev. Palaeobotany Palynology*, **65**, 1-4, 331-339.

Damuth, J.E. and Olson, H.C. 1993. Preliminary observations of Neogene-Quaternary depositional processes in the Faeroe-Shetland Channel revealed by high-resolution seismic facies analysis. In: Parker, J.R. (ed), *Petroleum geology of Northwest Europe: Proceedings of the 4th Conference*. Geological Society, London, Special Publication, 2 vols., 1035-1045.

Dancer, P.N., Algar, S.T. and Wilson, I.R. 1997. Structural evolution of the Slyne Trough. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 77.

Day, G.A., Edwards, J.W.F. and Hillis, R.R. 1989. Influences of Variscan structures off southwest Britain on subsequent phases of extension. *American Association of Petroleum Geologists Memoir*, **46** (Extensional tectonics and stratigraphy of the North Atlantic margins), 425-432.

Dean, K., McLachlan, K. and Chambers, A. 1997. Rifting and the development of the Faeroe-Shetland Basin. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 99.

Deep Sea Drilling Project 1997, Leg 162. Preliminary report (includes sites 980 and 981 in Rockall Trough, site 982 in Hatton Basin), 17pp.  
<http://www-odp.tamu.edu/publications/prelim/162~prelim/162RESULTS.HTML>

De Graciansky, P.C. 1985. Sedimentologic study of Mid Cretaceous carbonaceous limestones at sites 549 and 550, Northeast Atlantic. Initial Reports of the Deep Sea Drilling Project, **80**, Part 2. US Government Printing Office, Washington DC, 885-897.

De Graciansky, P.C. and Bourbon, M. 1984. The Goban Spur of the northeast Atlantic margin during Late Cretaceous times. Initial Report of the Deep Sea Drilling Project, **80**. US Government Printing Office, Washington DC, 863-883.

De Graciansky, P.C. and Poag, C.W. 1984. Geologic history of Goban Spur, northeast Europe continental margin. Initial Report of the Deep Sea Drilling Project, **80**. US Government Printing Office, Washington DC, 1187-1216.

De Graciansky, P.C., Brosse, E., Deroo, G., Herbin, J-P., Montadert, L., Muller, C., Sigal, J. and Schaaf, A. 1987. Organic-rich sediments and palaeoenvironmental reconstructions of the Cretaceous North Atlantic. In: Brooks, J. and Fleet, A.J. (eds), *Marine Petroleum Source Rocks*. Geological Society, London, Special Publication, **26**, 317-344.

De Graciansky, P.C., Poag, C.W., Hailwood, E.A., Mason, D.G., Knox, R.W. O'B. and Montadert, L. 1984. Evidence for changes in Mesozoic and Cenozoic oceanic circulation on the south-western

continental margin of Ireland: DSDP/IPOD (Deep Sea Drilling Project/International Phase of Ocean Drilling) Leg 80. In: Summerhayes, C.P. and Shackleton, N.J. (eds), North Atlantic Palaeoceanography. Geological Society, London, Special Publication, **21**.

De Graciansky, P.C., Poag, C.W., Cunningham, R. Jr., Loubere, P., Masson, D.G., Mazzullo, J.M., Montadert, L. *et al.* 1985. The Goban Spur transect: geological evolution of a sediment-starved passive continental margin. Geological Society of America Bulletin, **96**, 58-76.

Deminex. 1977. 34/15-1, Porcupine Basin offshore Ireland, Well Completion report.

Dennehy, C.J. PhD in progress. Sequence stratigraphy and palynological correlation of the late Jurassic and early Cretaceous in the north and northeast of the Porcupine Basin. University College Cork.

Department Of Energy, PAD. 1982. Northwest Irish Offshore Basins Report.

Department Of Energy, PAD. 1986. Petrographic and diagenetic study of reservoirs in the Porcupine Basin. Report prepared for the Department of Energy by P.M. Shannon.

Detrick, R.S., White, R.S. and Purdy, G.M. 1993. Crustal structure of North Atlantic fracture zones. Reviews of Geophysics, **31**, 439-458.

De Verteuil, L., Head, M.J. and Norris, G. 1996. North Atlantic Neogene dinoflagellate cyst chronostratigraphy; true business horizons. American Association of Petroleum Geologists international conference and exhibition; abstracts, **80**, p 1286.

Dewey, J.F. and Windley, B.F. 1988. Palaeocene - Oligocene tectonics of NW Europe. In: Morton, A.C. and Parson, L.M. (eds), Early Tertiary Volcanism and the opening of the NE Atlantic. Geological Society Special Publication, **39**, 25-31.

Dickin, A.P. 1992. Evidence for an Early Proterozoic crustal province in the North Atlantic region. Journal of the Geological Society, London, Vol. **149**, 483-486.

Dickin, A.P. and Dickin, D.R. 1991. Isotopic evidence for the extent of early Proterozoic basement in Scotland and north-west Ireland. Geological Magazine, Vol. **128**, 385-388.

Dickson, R.R., Kidd, R.B., *et al.* 1987. Deep circulation in the southern Rockall Trough, the oceanographic setting of Site 610. In: Initial reports of the Deep Sea Drilling Project covering Leg 94 of the cruises of the drilling vessel Glomar Challenger, Norfolk, Virginia, to St. John's, Newfoundland, June-August 1983, 1061-1074.

Diester-Haass, L. 1989. Volcanic ash layers in the North Atlantic (DSDP (Deep Sea Drilling Project) Site 552a): a Stratigraphic Tool? Marine Geology, **86**, 2-3, 221-227.

Diester-Haass, L. and Schnitker, D. 1989. Plio-Pleistocene sedimentation regimes leading to chalk-marl cycles in the North Atlantic (DSDP site 552-hole 552a). Geol. Rundsch., **78**, 3, 959-985.

Dietrich, V.J. and Jones, E.J.W. 1980. Volcanic rocks from Rosemary Bank (Rockall Trough, NE Atlantic). Marine Geology, **35**, 287-297.

Dingle, R.V. and Scrutton, R.A. 1977. Continental Margin fault pattern mapped southwest of Ireland. Nature, **268**, 728-730.

Dingle, R.V. and Scrutton, R.A. 1979. Sedimentary succession and tectonic history of a marginal plateau (Goban Spur, Southwest of Ireland). Marine Geology, **33**, 45-69.

Dingle, R.V., Megson, J.B. and Scrutton, R.A. 1982. Acoustic stratigraphy of the sedimentary succession west of Porcupine Bank, NE Atlantic Ocean: a preliminary account. Marine Geology, **47**, 17-35.

- Dobson, M.R. and Evans, D. 1974. The geological structure of the Malin Sea. *Journal of the Geological Society, London*, **136**, 243-249.
- Dobson, M.R., Garrett, P., Haynes, J.R., Jenkins, D.G., and Medani, A.H. 1976. Upper Cretaceous and Cenozoic carbonates from the margins of Rockall Trough, North Atlantic. *Journal of the Geological Society, London*, **132**, 611-621.
- Dobson, M.R., Haynes, J.R., Bannister, A.D., Levene, D.G., Petrie, H.S. and Woodbridge, R.A. 1991. Early Tertiary palaeoenvironments and sedimentation in the NE Main Porcupine Basin (Well 35/ 13-1), offshore western Ireland; evidence for global change in the Tertiary. *Basin Research*, **3**, 2, 99-117.
- Dolan, J.F. 1987. The relationship between the "R2" seismic reflector and a zone of abundant detrital and authigenic smectites, Deep Sea Drilling Project (Leg 94) Hole 610, Rockall Plateau Region, North Atlantic. Initial reports of the Deep Sea Drilling Project, **94**, Part 2. US Government Printing Office, Washington DC, 1109-1115.
- Domzalski, W. 1971. An aeromagnetic survey offshore West Coast of the Republic of Ireland - Interpretation Report.
- Doré, A.G. 1991. The structural foundation and evolution of Mesozoic seaways between Europe and the Arctic. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **87**, 441-492.
- Doré, A.G. 1992. Synoptic palaeogeography of the Northeast Atlantic Seaway: late Permian to Cretaceous. In: Parnell, J. (ed), *Basins on the Atlantic Seaboard: Petroleum Geology, Sedimentology and Basin Evolution*. Geological Society, London, Special Publication, **62**, 421-446.
- Doré, A.G. and Lundin, E.R. 1996. Cenozoic compressional structure of the NE Atlantic margin: Nature, origin and potential significance for hydrocarbon exploration. *Petroleum Geoscience*, **2**, 299-311.
- Doré, A.G., Lundin, E.R., Birkeland, Ø., Eliassen, P.E. and Jensen, L.N. 1997. The NE Atlantic Margin: implications of late Mesozoic and Cenozoic events for hydrocarbon prospectivity. *Petroleum Geoscience*, **3**, 117-131.
- Doré, A.G., Lundin, E.R., Birkeland, Ø., Eliassen, P.E., Fichler, C. and Jensen, L.N. 1997. Frontier basins on the Atlantic margin between Northern Norway and Ireland: tectonic evolution and implications for hydrocarbon systems. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstracts, 7-8.
- Doré, A.G., Lundin, E.R., Fichler, C. and Olesen, O. 1997. Patterns of basin structure and reactivation along the NE Atlantic margin. *Journal of the Geological Society, London*, **154**, 85-92.
- Doré, A.G., Lundin, E.R. and Jensen, L.N. 1998. Cenozoic uplift and exhumation on the North Atlantic margin. Abstract, *Geoscience 1998*, 14-18 April 1998, Keele University.
- Dowdeswell, J.A., Maslin, M. A., Andrews, J.T. and McCave, I.N. 1995. Iceberg production, debris rafting, and the extent and thickness of Heinrich layers (H-1, H-2) in North Atlantic sediments. *Geology*, **23**, 301-304.
- Dowling, L.M. and McCave, I.N. 1993. Sedimentation on the Feni Drift and late glacial bottom water production in the northern Rockall Trough. *Sedimentary Geology*, **82**, 79-87.
- Draper, P., Hunter, P.M. and Parr, I. P. 1990. Index of RRS "Discovery" cruises until August 1988, with track charts.
- Duane, A. 1988. The Quaternary palynology of cores from the Porcupine Basin, offshore western Ireland. Unpublished M.Sc. thesis, University of Sheffield.



- Duane, A. and Harland, R. 1990. Late Quaternary dinoflagellate cyst biostratigraphy for sediments of the Porcupine Basin, offshore western Ireland. Review of Palaeobotany and Palynology, **63**, 1-2, 1-11.
- Ducasse, O. and Peypouquet, J.P. 1978. Ostracodes and the palaeogeographical and paleohydrological evolution of north east Atlantic continental margins during the Cenozoic. Bull. Soc. Geol. Fr., **20**, 4, 441-452.
- Duddy, I.R., Gleadow, A.J.W. and Keene, J.B., 1984. Fission track dating of apatite and sphene from Paleogene sediments of Deep Sea Drilling Project Leg 81, Site 555. In: Roberts, D. G., Schnitker, D., *et al.* Initial reports of the Deep Sea Drilling Project, Vol. 81: Washington(U. S. Government printing office).
- Duinham, P. and van Hoorn, B. 1987. Structural evolution of the West Shetland continental margin. In: Brooks, J. and Glennie, K. (eds), Petroleum Geology of North West Europe. Graham and Trotman, London, 765-773.
- Dunbar J.A. and Sawyer, D.S. 1996. Three dimensional dynamical model of continental rift propagation and margin plateau formation. Journal of Geophysical Research.
- Earle, M.M., Jankowski, E.J. and Vann, I.R. 1989. Structural and stratigraphic evolution of the Faeroe-Shetland Channel and northern Rockall Trough. In: Tankard, A.J. and Balkwill, H.R. (eds), Extensional Tectonics and Stratigraphy of the North Atlantic Margins. American Association of Petroleum Geologists Memoir, **46**, 461-469.
- Earls, T.C. 1995. Potential for development of the Connemara field, Block 26/28. In: Croker, P.F. and Shannon, P.M. (eds), The Petroleum geology of Ireland's Offshore Basins. Geological Society, London, Special Publication, **93**, p. 343.
- Ebdon, C.C., Granger, P.J., Johnson, H.D. and Evans, A.M. 1995. Early Tertiary evolution and sequence stratigraphy of the Faeroe-Shetland Basin: implications for hydrocarbon prospectivity. In: Scrutton, R.A., Stoker, M.S., Shimmield, G.B. and Tudhope, A.W. (eds), The Tectonics, Sedimentation and Palaeoceanography of the North Atlantic region. Geological Society, London, Special Publication, **90**, 51-69.
- Eden, R.A., Wright, J.E. and Bullerwell, W. 1971. The solid geology of the East Atlantic continental margin adjacent to the British Isles. In: Delany, T.M. (ed), Institute of Geological Sciences Report No. **70/14**, The Geology of the East Atlantic Continental Margin, 113-128.
- Edwards, J.W.F., Sankey, M.J. and Readman, P.W. 1994. A Bouguer anomaly map of Ireland and surrounding waters., 58-59. "The Petroleum Geology of Ireland's Offshore Basins" conference, Dublin, 21-22 April, 1994 - expanded abstracts.
- Edwards, L.E., 1984. Miocene dinocysts from Deep Sea Drilling Project Leg 81, Rockall Plateau, eastern North Atlantic Ocean. In: Roberts, D. G., Schnitker, D., *et al.* Initial reports of the Deep Sea Drilling Project, Vol. 81: Washington (U. S. Government printing office).
- Egerton, P.D. 1998. Seismic characterization of Palaeogene depositional sequences: northeastern Rockall Trough. In: Stoker, M.S., Evans, D. and Cramp, A. (eds), Geological processes on continental margins: Sedimentation, Mass-wasting and Stability. Geological Society, London, Special Publication, **129**, 217-228.
- Eggers, M.R. and Ehrlich, R. 1985. Distinction of glacial and interglacial cycles on Feni and Gardar drifts, North Atlantic. American Association of Petroleum Geologists Bulletin, **69**, p. 252.
- Eggers, M.R. and Ehrlich, R. 1987. Provenance changes of fine quartz sands in glacial and interglacial intervals of the Feni and Gardar drifts, North Atlantic; Fourier shape analysis. Initial Reports of the Deep Sea Drilling Project, **94**. U.S. Government Printing Office, Washington DC, 1103-1108.

- Eldholm, O. 1990. Paleogene North Atlantic magmatic-tectonic events: environmental implications. *Mem Soc Geol Italia*, Vol 44, 13-28.
- Eldholm, O., Thiede, J. *et al.* 1989. Proceedings of the Ocean Drilling Program, **104**. U.S. Government Printing Office, Washington DC.
- Eldholm, O., Thiede, J. and Taylor, E. 1990. Palaeogene North Atlantic magmatic-tectonic events: environmental implication. *Memoire della Societa Geologica Italiana*, **44**, 13-28.
- Elf Aquitaine Ireland Limited. 1981. Offshore Ireland Porcupine Basin: Completion report well 34/5-1.
- Elf Aquitaine Ireland Limited. 1982. Offshore Ireland Slyne Trough: 27/13-1 geological report.
- Ellett, D.J. 1986. The hydrography of the Rockall Channel - an overview.
- Ellett, D.J. 1988. Bottom topography to the west of the Wyville-Thomson Ridge.
- Ellett, D.J. 1990. Cruise Report: RRS "Challenger" Cruise 67/1990, 21 June - 5 July 1990. Rockall Trough.
- Ellett, D.J. 1991. Cruise Report: RRS "Challenger" Cruise 75/1991, 14 February - 3 March 1991. Rockall Trough.
- Ellett, D.J. 1992. West of Shetland frontier tranches physical oceanography. West of Shetlands frontier tranches 4-8 Pre-licence environmental assessment. Unpublished report to Mobil North Sea Ltd.
- Ellett, D.J. 1995. Physical oceanography of the Rockall Trough.
- Ellett, D.J. 1996. Estimates of dispersion near the sea bed at the North Feni Ridge dump site.
- Ellett, D.J. and Macdougall, N. 1985. Hydrographic conditions in the Rockall Channel and to the west of Scotland during 1982.
- Ellett, D.J., Edwards, A. and Bowers, R. 1986. The hydrography of the Rockall Channel - an overview. *Proceedings of the Royal Society of Edinburgh*, **88B**, 61-81.
- Ellett, D.J., Gage, J.D., Gordon, J.D.M., Jones, E.J.W. and Mauchline, J. 1986. A bibliography of the Rockall Trough.
- Ellett, D.J., Kruseman, P., Prangsma, G.J., Pollard, R.T., van Aken, H.M., Edwards, A., Dooley, H.D. and Goulds, W.J. 1983. Water masses and mesoscale circulation of North Rockall Trough waters during JASIN 1978. *Philosophical Transactions of the Royal Society of London*, **308A**, 231-252.
- Emeleus, C.H., 1982. Tertiary igneous activity: the central complexes (British Isles).
- ENAM II 1997. Abstracts, Faeroe - Rockall Margin workshop - seismic stratigraphy and palaeoceanography, 30 January - 1 February 1997, Torshavn, Faeroes.
- ENAM II 1997. Abstracts, first workshop, 12-13 April 1997, Kiel, Germany.
- ENAM II 1997. Abstracts, second workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- England, R.W. 1988. The Early Tertiary stress regime in NW Britain: Evidence from the patterns of volcanic activity. In: Morton, A.C. and Parson, L.M. (eds), *Early Tertiary volcanism and the opening of the NE Atlantic*. Geological Society, London, Special Publication, **39**, 381-391.
- England, R.W. 1992. The role of Palaeocene magmatism in the tectonic evolution of the Sea of the Hebrides Basin: implications for basin evolution on the NW Seaboard. In: Parnell, J. (ed), *Basins on the*

Atlantic Seaboard: Petroleum Geology, Sedimentology and Basin Evolution. Geological Society, London, Special Publication, **62**, 163-175.

England, R.W. 1994. WESTLINE - a deep seismic profile across the Rockall Trough. JAG Newsletter, **5**, p. 78.

England, R.W. 1995. The seismic signature of the Iapetus Suture zone beneath the North Sea. *Studia Geophysica et Geodaetica*, **39**, 235-240.

England, R.W. 1995. WESTLINE: a deep near-normal incidence reflection profile across the Rockall Trough. In: Croker, P. and Shannon, P.M (eds), *The Petroleum geology of Ireland's offshore basins*. Geological Society, London, Special Publication, **93**, 423-427.

England, R.W. 1997. Deep structure of North West Europe from deep seismic profiling: the link between basement tectonics and basin development. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 37.

England, R.W. and Hobbs, R.W. 1997. The structure of the Rockall Trough imaged by deep seismic reflection profiling. *Journal of the Geological Society, London*, **154**, 497-502.

England, R.W., Butler, R.W.H. and Hutton, D.H.W. 1993. The role of Palaeocene magmatism in the Tertiary evolution of basins on the NW seaboard. In: Parker, J.R. (ed), *Petroleum geology of Northwest Europe: Proceedings of the 4th Conference*. Geological Society, London, Special Publication, 2 vols., 97-105.

Evans, D. 1996. Physiography, pathways and processes on the European Continental Margin. Scale 1:5,000,000. British Geological Survey, Edinburgh.

Evans, D., Abraham, D.A. and Hitchen, K. 1989. The Geikie igneous centre, west of Lewis: its structure and influence on Tertiary geology. *Scottish Journal of Geology*, Vol. **25**, 339-352.

Evans, D., Kenolty, N., Dobson, M.R. and Whittington, R.J. 1980. The geology of the Malin Sea. Report, Institute of Geological Sciences, London, **79/15**, p 44.

Evans, L.W. 1994. Late Quaternary stratigraphy of the Hatton and Resolution basins, Southeast Baffin Island Shelf, N.W.T., Canada. Masters Thesis from the University of Colorado at Boulder.

Ewing, M. and Ewing, J. 1958. Seismic refraction measurements in the Atlantic Ocean basins, in the Mediterranean Sea, on the Mid-Atlantic Ridge and in the Norwegian Sea. *Bulletin of the Geological Society of America*, **70**, 291-318.

Fannin, N.G.T. 1989. Offshore investigations 1966-87. British Geological Survey Technical Report WB/89/2.

Farrow, G.E. and Owen, E.F., 1980. Shallow-water Cretaceous brachiopods from the Rockall Bank, North Atlantic. *Palaeontology*, 1980.

Faugeres, J.C., Gonthier, E., Grousset, F. and Poutiers, J. 1981. The Feni Drift; the importance and meaning of slump deposits on the eastern slope of the Rockall Bank. *Marine Geology*, **40**, 49-57.

Faugeres, J.C., Mezeraïs, M.L. and Stow, D.A.V. 1993. Contourite drift types and their distribution in the North and South Atlantic Ocean basins. *Sedimentary Geology*, **82**, 189-203.

Ferragne, A., Latouche, C. and Parra, M. 1984. Lower Eocene red clay sedimentation on the George Bligh/Rockall Channel. *Geo Marine Letters*, **4**, 2, 77-82.

Ferry, S. and Pastouret, L. 1982. Alternation marl limestone in the Quaternary and Cretaceous periods: The same climatic control. *Reun. Annu. Sci. Terre*, **9**, p. 244.

- Fiolet-Piette, A., Chamley, H. and Holtzapffel, T. 1990. Plio-Quaternary clay sedimentation on the Armorican Margin (DSDP Leg 90). *Soc. Geol. Nord. Ann.*, **108**, 4, 165-176.
- Flood, R.D., Hollister, C.D. and Lonsdale, P. 1979. Disruption of the Feni Sediment Drift by Debris Flows from Rockall Bank. *Marine Geology*, **32**, 311-334.
- Flood, R.D., Lonsdale, P. and Hollister, C.D. 1976. Microtopography studies in the Rockall Trough, Northeast Atlantic. Abstracts with programs. Geological Society of America, **8**, p. 868.
- Folami, S., Hailwood, E.A. and Townsend, H. 1982. Evidence for late Cretaceous and early Cenozoic oceanographic events in the NE Atlantic from magnetometric studies of IPOD sediment cores. *Eos, Transactions, American Geophysical Union*, **63**, 51, p. 1278.
- Ford, M., Klemperer, S. and Ryan, P.D. 1992. The deep structure of southern Ireland: a new geological synthesis using BIRPS deep reflection profiling. *Journal of the Geological Society, London*, **149**, 915-922.
- Forsyth, D.A., Argyle, M., Okulitch, A. and Trettin, H.P. 1994. New seismic, magnetic, and gravity constraints on the crustal structure of the Lincoln Sea continent ocean transition. *Canadian Journal of Earth Sciences Review*, **31**, 6, 905-918.
- Fowler, S. and McKenzie, D. 1989. Gravity studies of the Rockall and Exmouth Plateaux using SEASAT. *Basin Research*, **2**, 27-34.
- Fowler, S.R., White, R.S., Spence, G.D. and Westbrook, G.K. 1989. The Hatton Bank continental margin II. Deep structure from two-ship expanding spread seismic profiles. *Geophysical Journal*, **96**, 295-309.
- Freeman, B., Klemperer, S.L. and Hobbs, R.W. 1988. The deep structure of Northern England and the Iapetus Suture Zone from BIRPS deep seismic reflection profiles. *Journal of the Geological Society, London*, **145**, 727-740.
- Froget, C., Desprairies, A., Latouche, C. and Maillet, N. 1989. Palaeoenvironmental significance of Cenozoic clay deposits from the Norwegian Sea: ODP Leg 104. *Proceedings Of The Ocean Drilling Program*, **104**. US Government Printing Office, Washington DC, 41-60.
- Funnel, B.M. 1964. *Geological Magazine*, **101**, 421-434.
- Fyfe, J.A., Long, D. and Evans, D. 1993. United Kingdom offshore regional report: the geology of the Malin-Hebrides area. (London: HMSO for the British Geological Survey).
- Gage, J. D. 1990. Cruise Report: RRS "Challenger" Cruise 63/1990, 4-30 March 1990. Rockall Trough.
- Gardiner, P.R.R., Riddihough, R.P. and Robinson, K.W. 1974. Potential hydrocarbon basins off Ireland. *Technology Ireland*, 1974.
- Gardiner, P.R.R. and MacCarthy, I.A.J. 1981. The Late Palaeozoic evolution of southern Ireland in the context of tectonic basins and their trans-Atlantic significance. In: Kerr, J.W. and Ferguson, A.J. (eds) *Geology of the North Atlantic Borderlands*. Canadian Society of Petroleum Geologists, Memoir, **7**, 683-725.
- Gardiner, P.R.R. and Sheridan, D.J.R. 1981. Tectonic framework of the Celtic Sea and adjacent areas with special reference to the location of the Variscan front. *Journal of Structural Geology*, **3**, 317-331.
- Gatliffe, R.W. and Ritchie, J.D. 1998. Applications of the principles of seismic stratigraphy to the depositional history of the NE Atlantic margin - flood basalts. Abstract, Geoscience 1998, 14-18 April 1998, Keele University.

Gawthorpe, R.L and Hurst, J.M. 1993. Transfer zones in extensional basins: their structural style and influence on drainage development and stratigraphy. *Journal of the Geological Society, London*. Vol. **150**, 1137-1153.  
Geochem Laboratories UK Limited. 1977. Geochemical evaluation of Deminex Ireland Limited's 34/15-1 well, offshore Eire.

Geochem Laboratories UK Limited. 1982. Geochemical evaluation of Esso Exploration and Production 62/7-1 (Goban Spur) well.

Geochem Laboratories UK Limited. 1982. Geochemical evaluation of three shale samples from core 3 in Esso's 62/7-1 (Goban Spur) well.

Geochem Laboratories UK Limited. 1991. Irish well 27/13-1: data report. Report **5164**.

Geochem Laboratories UK Limited. 1991. A partial geochemical analysis of well 27/13-1, drilled offshore Ireland. Report **5573**.

Geochem Laboratories UK Limited. 1991. A partial geochemical analysis of well 12/13-1a, drilled offshore Ireland. Report **5574**.

GEOMAR. 1996. Lithothek: ENAM II Project - Brief description.  
[www.geomar.de/zd/lithothek/ENAM\\_II.html](http://www.geomar.de/zd/lithothek/ENAM_II.html), 2 pp.

Geotrack 1991. Thermal history assessment of three samples from well 27/13-1, west of Ireland. Geotrack Report **353**.

Geotrack. 1992. Thermal history assessment of six samples from well 27/13-1, West of Ireland. Geotrack Report **375**.

Geotrack. 1993. Assessment of palaeogeothermal gradients and section removed by uplift and erosion in West of Ireland well 27/13-1, based on paleotemperature estimates from apatite fission track analysis and vitrinite reflectance. Geotrack Report **475**.

Geotrack 1993. Thermal history reconstruction in Erris Trough well 12/13-1A using apatite fission track analysis and vitrinite reflectance. Geotrack Report **492**.

Geotrack 1993. Assessment of palaeogeothermal gradients and section removed by uplift and erosion in west of Ireland well 27/13-1, based on paleotemperature estimates from apatite fission track analysis and vitrinite reflectance. Geotrack Report **496**.

Geotrack 1997. Thermal history reconstruction in west of Ireland Well 19/5-1 using apatite fission track analysis and vitrinite reflectance. Geotrack Report **651**.

Geraghty, D. PhD in progress. Sedimentary provenance studies in the Atlantic margin basins west of Ireland. University College Dublin.

Gerstell, M.F. and Stock, J.M. 1994. Testing the Porcupine Plate hypothesis. *Marine Geophysical Research*, **16**, 4, 315-323.

Gibb, F.G.F. and Kanaris-Sotiriou, R. 1988. The geochemistry and origin of the Faeroe-Shetland sill complex. In: Morton, A.C. and Parson, L.M. (eds), *Early Tertiary volcanism and the opening of the NE Atlantic*. Geological Society, London, Special Publication, **39**, 241-252.

Gilbert, R.L.G. 1967. Cruise report No. 180, Hudson, 67-019. Bedford Institute, p 22.

Glennie, K.W. and Hurst, A. 1996. NW Europe's Hydrocarbon Industry. The Geological Society, 256 pp.

- Godfrey, L.V., White, W.M. and Salters, V.J.M. 1996. Dissolved zirconium and hafnium distributions across a shelf break in the Northeastern Atlantic Ocean. *Geochimica et Cosmochimica Acta*, **60**, 21, 3995-4006.
- Goll, R.M. 1989. A synthesis of Norwegian Sea biostratigraphies: ODP Leg 104 on the Vøring Plateau. In: *Proceedings of the Ocean Drilling Program, Scientific Results*, Vol. **104**, pp.777-829. College Station, TX: Ocean Drilling Program.
- Goll, R.M. and Bjørklund, K.R. 1989. A new radiolarian biostratigraphy of Norwegian Sea sediments: ODP Leg 104. In: Eldholm, O., Thiede, J. and Taylor, E. (eds), *Proceedings of the Ocean Drilling Program, Scientific Results*, Vol. **104**, pp. 697-738. College Station, TX: Ocean Drilling Program.
- Goodchild, M., Henry, K., Hinkley, R. and Imbus, S. 1997. The Victory Field. In: *5th Conference on Petroleum Geology of NW Europe*. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 117.
- Graciansky, P.C. de and Poag, C.W. *et al* 1985. Geological history of the Goban Spur, northwest Europe continental margin, In: Graciansky, P. C. de & Poag, C. W. *et al* ., *Initial reports of the Deep Sea Drilling Project*, 80. Washington. (U. S. Government printing office).
- Gramberg, I.S. and Krasilshchikov, A.A. 1989. Problems of oil-gas potential of deep-water zones of the world ocean. *Petroleum Geology*, **23**, 3-4, 124-125.
- Granier, B. 1994. Early Valanginian unconformities in central Atlantic and Western Mediterranean areas. In: Masse, J.P. (Ed), *Perimediterranean Carbonate Platforms*. First International Meeting, Marseille France, 5-8-September, 1994. Marseille, France, Universite de Provence, **21**, 3-4, 81-85.
- Grant, N., Bouma, A., McIntyre, A. and Frost, B. 1997. The Turonian play in the Faeroe-Shetland Basin. In: *5th Conference on Petroleum Geology of NW Europe*. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 103.
- Gray, F. and Stacey, A.P. 1970. Gravity and magnetic interpretation of Porcupine Bank and Porcupine Bight. *Deep Sea Research*, **17**, 467-475.
- Gray, F., Scrutton, R.A. and Stacey, A.P. 1971. Evidence for the mode of formation of Porcupine Seabight. *Earth and Planetary Science Letters*, **11**, p 140.
- Green, P.F., Duddy, I.R. and Bray, R.J. 1997. Variation in thermal history styles around the Irish Sea and adjacent areas: implications for hydrocarbon occurrence and tectonic evolution. In: Meadows, N.S., Trueblood, S., Hardman, M. and Cowan, G. (eds) *Petroleum Geology of the Irish Sea and Adjacent Areas*, Geological Society, London, Special Publication, **124**, 73-93.
- Green, P., Duddy, I., Bray, R. and Hegarty, K. 1997. Early Tertiary heat flow along the UK Atlantic Margin and adjacent areas. In: *5th Conference on Petroleum Geology of NW Europe*. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 89.
- Griffith, C.E. 1997. Regional aspects and petroleum implications of the UK sector of the Northeast Atlantic Margin, a challenging new frontier. PESGB Lecture, June 1997, London. [www.databydesign.co.uk/pesgb.org.uk/lecture/97JUNLON.html](http://www.databydesign.co.uk/pesgb.org.uk/lecture/97JUNLON.html).
- Grimaud, S., Boillot, G., Collette, B.J., Mauffret, A., Miles, P.R. and Roberts, D.G. 1982. Western extension of the Iberian-European Plate Boundary during the early Cenozoic (Pyrenean) Convergence: A new model. *Marine Geology*, **45**, 63-77.
- Hadley, M.L. 1964. *Deep Sea Research*, **11**, 767-779.
- Haflidason, H. King, E.L., Laberg, J.S., Gravdal, A., Nygaard, A. Masson, D. and Sejrup, H.P. 1997. The TOBI survey cruise on the Norwegian margin. Abstract, Second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.

Hailwood, E.A. 1978. Magnetic properties of deep sea sediments and North Atlantic palaeoceanography. *Geophys. J. R. Astron. Soc.*, **53**, 1, p. 147.

Hailwood, E.A. and Sayre, W.O. 1978. Magnetic fabric of DSDP Mesozoic and Cenozoic sediments from Biscay and Rockall. *Geophys. J. R. Astron. Soc.*, **53**, 1, p. 156.

Hailwood, E.A., Kidd, R.B. and Dowling, L. 1987. The magnetic fabric of Neogene and Quaternary sediments on the Feni and Gardar drifts, Northeastern Atlantic, Deep Sea Drilling Project sites 610 and 611. Initial Reports of the Deep Sea Drilling Project, **94**. US Government Printing Office, Washington DC, 1083-1088.

Haldemann, E. 1984. Europe potential viewed; offshore basins show promise. *American Association of Petroleum Geologists Explorer*, **5**, 9, pp. 1, 3, 25-26.

Hall, B.D. and White, N.J. 1994. Origin of anomalous Tertiary subsidence adjacent to North Atlantic continental margins. *Marine and Petroleum Geology*, **11**, 702-714.

Hall, I.R., McCave, I.N. and Chapman, M.R. 1997. Glacial-interglacial switching of organic carbon sources on the slope and rise of NW Europe, 480-500N [18/1B29]. *Terra Abstracts*, **9**, 1, p. 248.

Hall, J. and Smythe, D.K. 1973. Discussion of the relation of Palaeogene Ridge and basin structures of Britain to the North Atlantic. *Earth and Planetary Science Letters*, **19** (1).

Hall, J., Brewer, J.A., Matthews, D.H. and Warner, M.R. 1984. Crustal structure across the Caledonides from the 'WINCH' seismic profile: influences on the evolution of the Midland Valley of Scotland. *Transactions of the Royal Society of Edinburgh: Earth Sciences*, Vol. **75**, 97-109.

Hallam, A. 1972. Relation of the Palaeogene ridge and basin structures and volcanicity in the Hebrides and Irish Sea regions of the British Isles to the opening of the North Atlantic. *Earth and Planetary Science Letters*, **16**, 171-177.

Hanisch, J. 1984. The Cretaceous opening of the North East Atlantic. *Tectonophysics*, **101**, 1-23.

Hanson, T.J. and Geraghty, D. 1976. Estimation and significance of Ireland's offshore production potential. *Technology Ireland*, 4<sup>th</sup> February.

Harding, R.R. 1979. Petrography of some pebble fragments from DSDP leg 48, site 405, southwest margin of Rockall Plateau. In: Montadert, L. & Roberts, D.G. Initial reports of the Deep Sea Drilling Project, Vol. 48 Washington (U.S. Government printing office). pp. 272-273.

Hardman, R.F.P. and Brooks, J. 1990. Tectonic events responsible for Britain's oil and gas reserves. *Geological Society, London, Special Publication*, **55**.

Hardy, B.L.S. 1980. Cruise Report: RRS "Challenger" Cruise 8/1980, 10-23 May 1980. Rockall Trough. *Scottish Marine Biological Association, Dunstaffnage, Oban*, 22 pp & tables.

Harker, S.D. 1993. Submarine fan types in the Porcupine Basin, Ireland. In: Spencer, A.M. (Ed) *Generation, Accumulation and Production of Europe's Hydrocarbons III*. European Association of Petroleum Geoscientists Special Publication, **3**, Springer-Verlag, Berlin, 111-120.

Harker, S.D. and Shannon, P.M. 1992. Palaeocene-Eocene deltaic sedimentation, Porcupine Basin, offshore Ireland - a sequence stratigraphic approach. *First Break*, **10**, 461-469.

Harker, S.D., Moore, J.G. Jacob, A.W.B. and Makris, J. 1993. Cretaceous and Tertiary basin development west of Ireland. In: Parker, J.R. (ed) *Petroleum Geology of Northwest Europe: Proceedings of the 4<sup>th</sup> Conference*. The Geological Society, London, 1057-1066.

- Harland, R., 1984. Quaternary dinoflagellates cysts from hole 522A, Rockall Plateau, DSDP Leg 81. In: Roberts, D. G., Schnitker, D., *et al.* Initial Reports of the Deep Sea Drilling Project, Vol. **81**, pp.429-438. Washington, U.S. Government Printing Office.
- Harland, R. 1989. A dinoflagellate cyst record for the last 0.7Ma from the Rockall Plateau, northeast Atlantic Ocean. *Journal of the Geological Society, London*, **146**, 945-961.
- Harland, R. 1992. Dinoflagellate cyst biostratigraphy of the last 2.3Ma from the Rockall Plateau, northeast Atlantic Ocean. *Journal of the Geological Society, London*, **149**, 7-12.
- Harland, W.B., Armstrong, R.L., Cox, A.V., Craig, L.E., Smith, A.G. and Smith, D.G. 1990. A geologic time scale 1989. (Cambridge: Cambridge University Press).
- Harrison, R.K. 1982. Mesozoic magmatism in the British Isles and adjacent areas. In: Sutherland, D.S. (ed), *Igneous rocks of the British Isles*, 333-341.
- Harrison, R.K., Tresham, A.E, Snelling, N.J and Rundle, C.C. 1975. Helen's Reef: Petrography, chemistry and K-Ar age determination. 63-72. In: Harrison, R K (ed). *Expeditions to Rockall 1971-72. Report of the Institute of Geological Sciences*, No. 75/1.
- Hart, M.B. and Crittenden, S. 1985. Early Cretaceous ostracoda from the Goban Spur, DSDP, **80**, Goban Spur Cretaceous Research. **6**, 219-233.
- Haszeldine, R.S. 1984. Carboniferous North Atlantic palaeogeography: stratigraphic evidence for rifting, not megashear or subduction. *Geological Magazine*, Vol. **121**, 443-463.
- Haseldine, R.S. and Russell, M.J. 1987. The late Carboniferous North Atlantic Ocean; implications for hydrocarbon exploration from Britain to the Arctic. In: Brooks, J. and Glennie, K.W. (eds), *Petroleum geology of Northwest Europe*, vol. **2**, Graham and Trotman, London, 1163-1175.
- Haslett, S.K. 1995. Plio-Pleistocene radiolarian biostratigraphy and palaeoceanography of the North Atlantic. In: Scrutton, R.A., Stoker, M.S., Shimmield, G.B. and Tudhope, A.W. (eds), *The Tectonics, Sedimentation and Palaeoceanography of the North Atlantic Region*. Geological Society, London, Special Publication, **90**, 217-225.
- Hauser, F., Jacob, A.W.J., Shannon, P.M. and Makris, J. 1992. RAPIDS project: seismic structure of the crust under the Rockall Trough along a 600 km axial line. *Annales Geophysicae*, **8**, p. C66.
- Hauser, F., O' Reilly, B.M., Shannon, P.M., Jacob, A.W.B. and Makris, J. 1993. The crustal structure of the Rockall Trough; differential stretching without underplating. *American Geophysical Union 1993 Fall Meeting, San Francisco*. *Eos, Transactions, American Geophysical Union*, **74**, p. 444.
- Hauser, F., O' Reilly, B.M., Jacob, A.W.B., Shannon, P.M., Makris, J. and Vogt, U. 1995. The crustal structure of the Rockall Trough: differential stretching without underplating. *Journal of Geophysical Research*, **100**, 4097-4116.
- Hay, W.W and Wold, C.N. 1990. Kinetic connection; opening of the Rockall Trough, North Sea, North German Basin and shortening of the Harz Mountains. *Nachrichten-Deutsche Geologische Gesellschaft*, **43**, 36-37.
- Head, M.J. and Norris, G. Pliocene and lower Pleistocene dinoflagellates and acritarchs of the North Atlantic: taxonomy, magnetobiostratigraphy, and paleoclimatology. *Abstracts of the 28th Annual Meeting of the American Association of Stratigraphic Palynologists*.
- Heath, A. PhD in progress. The formation of the Rockall Trough. University College Dublin. [www.liv.ac.uk/www/mjc44/G/PG/rockall.html](http://www.liv.ac.uk/www/mjc44/G/PG/rockall.html), 4 pp.



- Heinrich, R., Wolf, T.C.W., Bohrmann, G. and Thiede, J. 1989. Cenozoic palaeoclimatic and palaeoceanographic changes in the northern hemisphere revealed by variability of coarse-fraction composition in sediments from the Vøring Plateau - ODP leg 104 drill sites. In: Eldholm, O., Thiede, J. *et al.* (eds), *Proceedings of the Ocean Drilling Program*, **104**, 75-188.
- Herries, R.D., Poddubiuk, R.H. and Wilcockson, P. 1997. Solan, Strathmore and the Mesozoic back basin play, west of Shetland. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 115.
- Hill, M.N. 1952. Seismic refraction shooting in an area of the eastern Atlantic. *Philosophical Transactions of the Royal Society*, **244A**, 561-596.
- Hill, M.N. and Laughton, A.S. 1954. Seismic observations in the Eastern Atlantic. *Proceedings of the Royal Society, Series A*, **222**, 348-356.
- Hill, P.R. 1987. Characteristics of sediments from Feni and Gardar drifts, sites 610 and 611, Deep Sea Drilling Project Leg 94. Initial Reports of the Deep Sea Drilling Project, **94**. US Government Printing Office, Washington DC, 1075-1082.
- Hill, P.R. and Kidd, R.B. 1985. Mid-ocean sediment drifts; sediment waves in a pelagic regime. Program with abstracts. Geological Association of Canada; Mineralogical Association of Canada; Canadian Geophysical Union joint annual meeting, **10**, p. A27.
- Hinz, K. 1981. An Hypothesis on terrestrial catastrophes, wedges of very thick oceanward dipping layers beneath passive continental margins, their origin and palaeoenvironmental significance. *Geologisches Jahrbuch*, E2, 3-28.
- Hinz, K., Eldholm, O., Block, M. and Skogseid, J. 1993. Evolution of North Atlantic volcanic continental margin. In: Parker, J.R. (ed), *Petroleum Geology of Northwest Europe: Proceedings of the 4th Conference*. Geological Society, London, Special Publication, 2 vols., 901-913.
- Hiscott, R.N., Wilson, R.C.L., Gradstein, F.M., Pujalte, V., Garcia-Mondejar, J., Boudreau, R.R. and Wishart, H.A. 1990. Comparative stratigraphy and subsidence history of Mesozoic rift basins of North Atlantic. *American Association Of Petroleum Geologists Bulletin*, **74**, 60-76.
- Hitchen, K. 1993. Crustal characteristics, volcanic history and prospectivity, offshore north-west Britain. PESGB Lecture. [www.databydesign.co.uk/pesgb.org.uk/lecture/93JANABD.html](http://www.databydesign.co.uk/pesgb.org.uk/lecture/93JANABD.html).
- Hitchen, K. 1994. Offshore geology of the UK northwestern margin. The petroleum geology of Ireland's offshore basins conference, Dublin. Technical Programme and Abstracts of Papers, 54 pp.
- Hitchen, K. and Ritchie, J.D. 1987. Geological review of the West Shetland area. In: Brooks, J. and Glennie, K. (eds), *Petroleum Geology of Northwest Europe*. Graham and Trotman, London, 737-749.
- Hitchen, K. and Ritchie, J.D. 1993. New K-Ar ages and a provisional chronology, for the offshore part of the British Tertiary igneous province. *Scottish Journal of Geology*, Vol. **29**, 73-85.
- Hitchen, K. and Stoker, M.S. 1993. Mesozoic rocks from the Hebrides Shelf and implications for hydrocarbon prospectivity in the northern Rockall Trough. *Marine and Petroleum Geology*, **10**, 246-254.
- Hitchen, K., Stoker, M.S., Evans, D. and Beddoe-Stephens, B. 1995. Permo-Triassic sedimentary and volcanic rocks in basins to the north and west of Scotland. In: Boldy, S.A.R. (ed) *Permian and Triassic Rifting in Northwest Europe*. Geological Society, London, Special Publication, **91**, 87-102.
- Hitchen, K., Morton, A.C., Mearns, E.W., Whitehouse, M. and Stoker, M.S. 1997. Geological implications from geochemical and isotopic studies of Upper Cretaceous and Lower Tertiary igneous rocks around the northern Rockall Trough. *Journal of the Geological Society, London*, **154**, 517-521.

- Holbrook, W.S. 1993. Seismic structure of rifted continental margins: recent results and outstanding questions. AGU Fall Meeting (San Francisco, December 1993) Paper S41b-1., Eos, Transactions, American Geophysical Union, **74**, 43 (Supplement), p. 430.
- Hollister, C.D. 1972. Palaeocirculation, formation of sediment drifts and origin of a hiatus between Eocene and Neocomian North Atlantic deep sea sediments. Abstracts with programs. Geological Society of America, **4**, p. 172.
- Holmes, A.J., Griffith, C.E. and Scotchman, I.C. 1997. The Jurassic petroleum system of the West of Britain Atlantic Margin - An integration of tectonics, geochemistry and basin modelling. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 233.
- Holmes, R. 1998. Evolution of early Pleistocene palaeogeography of shelves and slopes, N North Sea and NW of Shetland. Abstract, Geoscience 1998, 14-18 April 1998, Keele University.
- Holmes, R. *et al.* 1993. Quaternary Geology around the United Kingdom. Scale 1:1,000,000. British Geological Survey, Edinburgh.
- Holmes, R., Long, D. and Dodd, L.R. 1998. Large-scale debrites and submarine landslides on the Barra Fan, west of Britain. In: Stoker, M.S., Evans, D. and Cramp, A. (eds) Geological processes on continental margins: sedimentation, mass-wasting and stability. Geological Society London Special Publication, No. 129.
- Holser, W.T., Clement, G.P., Jansa, L.F. and Wade, J.A. 1988. Evaporite deposits of the North Atlantic Rift. In: Manspeizer, W. (ed), Triassic-Jurassic Rifting. Elsevier, Amsterdam, 525-553.
- Holser, W.T., Clement, G.P., Janasa, L.F. and Wade, J.A. 1988. Evaporite deposits of the North Atlantic rift. In: Manspeizer, W. (ed) Triassic-Jurassic Rifting, Continental Breakup and the origin of the Atlantic Ocean and Passive Margins. New York, Elsevier, 526-556.
- Hood, P.J., Sawatzky, P. and Bower, M.E. 1967. Progress report on low-level aeromagnetic profiles over the Labrador Sea, Baffin Bay, and across the North Atlantic Ocean. Geological Survey of Canada, **Paper 66-58**, 11.
- Horscroft, R. High resolution gravity and magnetics - 3D interpretation case studies. PESGB Lecture, October 1994, London. [www.databydesign.co.uk/pesgb.org.uk/lecture/94OCTLON.html](http://www.databydesign.co.uk/pesgb.org.uk/lecture/94OCTLON.html).
- Horsefield, S.J., Whitmarsh, R.B., White, R.S. and Sibuet, J-C. 1993. Crustal structure of the Goban Spur rifted continental margin, NE Atlantic. Geophysical Journal International, **119**, 1-9.
- Hospers, J. and Van Andel, S.I. 1968. Palaeomagnetic data from Europe and northern America and their bearing on the origin of the North Atlantic Ocean. Tectonophysics, **6**, 475-490.
- Hovland, M. 1990. Suspected gas associated clay diapirism on the seabed off Mid-Norway. Marine and Petroleum Geology, Vol. **7**, 267-276
- Hovland, M., Croker, P.F. and Martin, M. 1994. Fault-associated seabed mounds (carbonate knolls?) off western Ireland and Northwest Australia. Marine and Petroleum Geology, **11**, 232-246.
- Howe, J.A. 1991. Sedimentation and climate induced sediments on Feni Ridge, northeast Atlantic Ocean.
- Howe, J.A. 1994. Bottom currents, contourites and related sedimentation in the northern Rockall Trough, North Atlantic Ocean. University of Southampton, Faculty of Science. Geology, PhD Thesis, 259 pp (Unpublished Thesis).
- Howe, J.A. 1995. Sedimentary processes and variations in slope-current activity during the last Glacial-Interglacial episode on the Hebrides Slope, northern Rockall Trough, North Atlantic Ocean. Sedimentary Geology, **96**, 201-230.

- Howe, J.A. 1996. Turbidite and contourite sediment waves in the northern Rockall Trough, North Atlantic Ocean. *Sedimentology*, **43**, 219-234.
- Howe, J.A. and Humphery, J. D. 1995. Photographic evidence for slope-current activity, Hebrides Slope, NE Atlantic Ocean. *Scottish Journal of Geology*, **30**, 107-115.
- Howe, J.A. and Mabesoone, J.M. 1994. Turbidite and contourite sediment waves from the northern Rockall Trough, North Atlantic. 14<sup>th</sup> International Sedimentological Congress, abstracts, **S2.8-S2.9**.
- Howe, J.A., Stoker, M.S. and Stow, D.A.V. 1994. Late Cenozoic sediment drift complex, northeast Rockall Trough, North Atlantic. *Palaeoceanography*, **9**, 989-999.
- Hoy, T., Boldreel, L.O., Andersen, M.S. and Kiorboe, L. 1992. A high resolution seismic survey in the Faeroe-Rockall area. *Journal of Applied Geophysics*, **29**, 1, p. 85.
- Hubbard, R.J. 1988. Age and significance of sequence boundaries on Jurassic and Cretaceous rifted continental margins. *American Association of Petroleum Geologists Bulletin*, **72**, 49-72.
- Huddlestun, P.F. 1984. Planktonic foraminiferal biostratigraphy, Deep Sea Drilling Project Leg 81. In: Roberts, D.G. and Schnitker, D. (Eds), *Initial Reports of the Deep Sea Drilling Project*, Vol. **81**, pp.429-438. Washington, U.S. Government Printing Office.
- Hudson, J.D. 1980. Aspects of brackish-water facies and faunas from the Jurassic of north-west Scotland. *Proceedings of the Geologists' Association*, **91**, 99-105.
- Huthnance, J.M. 1986. The Rockall slope current and shelf edge processes.
- Hutton, D.H.W. and Alsop, G.I. 1996. The Caledonian strike-swing and associated lineaments in N.W. Ireland and adjacent areas: sedimentation, deformation and igneous intrusion patterns. *Journal of the Geological Society, London*, **153**, 345-360.
- Hydrocarbon Management International / PGS NOPEC 1996. Hydrocarbon potential of the sedimentary basins west of Ireland with relationship to discoveries west of Shetland.
- Illife, J., Robertson, A., Ward, G., Wynn, C., Peard, S. and Cameron, N. 1997. The hydrocarbon prospectivity of the Faeroe-Shetland White Zone. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 111.
- Illing, L.V. and Hobson, G.D. 1981. *Petroleum Geology of the Continental Shelf of Northwest Britain*. Institute of Petroleum, London.
- Institute of Geological Sciences 1973. Annual report for 1972. King's Norton Press Ltd., Birmingham and London.
- Institute of Geological Sciences 1974. I.G.S. boreholes 1973. Institute of Geological Sciences Report **74/7**, p 23.
- Institute of Geological Sciences 1975. I.G.S. boreholes 1974. Institute of Geological Sciences Report **75/7**, p 26.
- Institute of Geological Sciences 1976. I.G.S. boreholes 1975. Institute of Geological Sciences Report, p 76.
- International Geoscience / Hydrocarbon Management International 1997. The petroleum prospectivity of the Irish Rockall Margin.

IOC, IHO, and BODC, 1997, "GEBCO-97: The 1997 Edition of the GEBCO Digital Atlas", published on behalf of the Intergovernmental Oceanographic Commission (of UNESCO) and the International Hydrographic Organisation as part of the General Bathymetric Chart of the Oceans (GEBCO); British Oceanographic Data Centre, Birkenhead. This publication includes a CD-ROM.

IOS. 1974. Submersible investigations of the geology and benthos of the Rockall Bank. Institute of Oceanographic Sciences, Cruise Report, **1**.

Ivimey-Cook, H.C. and Worssam, B.C. 1971. Bulletin of the Geological Survey of Great Britain, **36**, 1-111.

Jacob, A.W.B. 1992. The RAPIDS project - a seismic profile in the Atlantic west of Ireland. Proceedings of the 5th Annual RV Lough Beltra Workshop, 32-42.

Jacob, A.W.B., Neilson, G. and Ward, V., 1983. A seismic event near the Hebrides Terrace Seamount. Scottish Journal of Geology, 1983.

Jacob, A.W.B., Shannon, P.M., Makris, J., Ginzburg, A., Liebe, T. and Bean, C.J. 1989. The extension of the continental crust west from Ireland: the RAPIDS 1988 profile. Geological Society of London/Royal Irish Academy Conference, "Deep geology and geophysics of Ireland and its continental margin". Galway, Abstracts.

Jacob, A.W.B., Makris, J., Shannon, P.M., Vogt, U. and Hauser, F. 1992. Lithospheric dynamics and the opening of the North Atlantic. American Geophysical Union 1992 Fall Meeting, San Francisco. Eos, Transactions, American Geophysical Union, p. 532.

Jacob, A.W.B. and Shannon, P.M. 1995. Ireland's western offshore basins and the development of the northeastern Atlantic. The Irish Scientist, **3**, 51.

Jacob, A.W.B., Hauser, F., O'Reilly, B.M., Readman, P.W., Shannon, P.M., Makris, J. and Vogt, U. 1995. The NE Atlantic Basins: Results from Wide-Angle Profiles. Annales Geophysicae, **13**, C135.

Jacob, A.W.B., Shannon, P.M., Makris, J., Hauser, F., Vogt, U. and O'Reilly, B.M. 1995. An overview of the results of the RAPIDS Seismic Project, North Atlantic. In: Croker, P.F. and Shannon, P.M. (Eds), The petroleum geology of Ireland's Offshore Basins. Geological Society, London, Special Publication, **93**, 429-431.

Jacob, A.W.B., Shannon, P.M., O'Reilly, B.M., Hauser, F. and Readman, P.W. 1996. Northeast Atlantic basins: results from wide-angle seismic profiles. 39th Annual Irish Geology Research Meeting, Dublin. Programme and Abstracts, p. 45.

Jacobi, R.D. and Kristoffersen, Y. 1981. Transatlantic correlations of geophysical anomalies of Newfoundland, British Isles, France and adjacent continental shelves. In: Kerr, J. W. and Fergusson, A.J. (Eds), Geology of the North Atlantic Borderlands. Canadian Society of Petroleum Geology, Memoir, **7**, 197-229.

Jacobs, C.L. 1987. Site surveys of Deep Sea Drilling Project Sites 608, 610, and 611. Initial reports of the Deep Sea Drilling Project, **94**, Part 1. US Government Printing Office, Washington DC, 593-603.

Jacobs, C.L., Ruddiman, W.F., Kidd, R.B., Baldauf, J.G., Clement, B.M., Dolan, J.F., Eggers, M.R., Hill, P.R., Keigwin, L.D.Jr., Mitchell, M., Phillips, I., Robinson, F., Salehipour, S.A., Takayama, T., Thomas, E., Unsold, G., Weaver, P.P.E. and Orlofsky, S. 1987. Site surveys of Deep Sea Drilling Project sites 608, 610 and 611. Initial reports of the Deep Sea Drilling Project covering Leg 94 of the cruises of the drilling vessel Glomar Challenger, Norfolk, Virginia, to St. John's, Newfoundland, June-August 1983, 593-603.

Jacovides, J. and Woollam, R. 1996. Elf well 27/13-1, Slyne Trough: Biostratigraphic analysis of the interval 535m-1800m. Millennia Limited Report, Project No: **203/96**.

James, J. PhD in progress. Depositional systems, provenance and diagenesis of Mesozoic sediments, Irish offshore basins. Trinity College, Dublin.

Jansen, E. and Raymo, M.E. 1996. (ODP) LEG 162: New Frontiers On Past Climates. Proceedings Of The Ocean Drilling Program, Initial Reports, **162**. US Government Printing Office, Washington DC, 5-20.

Jansen, E., Raymo, M.E., Blum, P., Andersen, E.S. Austin, W.E.N., Baumann, K.H., Carter, S.J., Channell, J.E.T. and Cullen, J.L. 1996. Site 982 (ODP LEG 162). Proceedings Of The Ocean Drilling Program, Initial Reports, **162**. US Government Printing Office, Washington DC, 91-138, 511-623, 1149-1151.

Jansen, E., Raymo, M.E., Blum, P., Andersen, E.S. Austin, W.E.N., Baumann, K.H., Carter, S.J., Channell, J.E.T. and Cullen, J.L. 1996. Site 980/981 (ODP LEG 162). Proceedings Of The Ocean Drilling Program, Initial Reports, **162**. US Government Printing Office, Washington DC, 49-90, 391-510, 1147-1148.

Jenkins, D.G. 1987. Middle Eocene to Miocene planktonic foraminifers from Deep Sea Drilling Project Sites 608 and 610, Northeastern Atlantic. Initial reports of the Deep Sea Drilling Project, **94**, Part 1. US Government Printing Office, Washington DC, 605-611.

Johnson, G.L. and Schneider, E.D. 1969. Depositional ridges in the North Atlantic. Earth and Planetary Science Letters, **6**, 6, 416-422.

Johnson, G.L., Vogt, P.R. and Schneider, E.D. 1969. Morphology, magnetic anomalies and evolution of northeast Atlantic and Labrador Sea. Part 1, Morphology. Eos, Transactions, American Geophysical Union, **50**, 4, pp. 184.

Johnson, G.L., Vogt, P.R. and Schneider, E.D. 1971. Morphology of the North-Eastern Atlantic and Labrador Sea. Deutsche Hydrographische Zeitschrift, **24**, 2, 49-73.

Joides 1972. Initial Reports of the Deep Sea Drilling Project. National Science Foundation, Washington, **12**, p 1243.

Jolley, D.W. 1997. Palaeosurface palynofloras of the Skye lava field and the age of the British Tertiary volcanic province. In: Widdowson, M. (Ed) Palaeosurfaces: recognition, reconstruction and palaeoenvironmental interpretation. Geological Society of London Special Publication No. 120, 67-94.

Jones, E.J.W., Mitchell, J.G., Shido, F. and Phillips, J.D. 1972. Igneous rocks dredged from the Rockall Plateau. Nature, Vol. **237**, 118-120.

Jones, E.J.W. 1978. Seismic evidence for sedimentary Troughs of Mesozoic age on the Hebridean continental margin. Nature, **272**, 789-792.

Jones, E.J.W. and Ramsay, A.T.S. 1983. Volcanic ash deposits of early Eocene age from the Rockall Trough. Nature, **299**, 342-344.

Jones, E.J.W., Mitchell, J.G. and Perry, R.G. 1986. Early Tertiary igneous activity west of the Outer Hebrides, Scotland - Evidence from magnetic anomalies and dredged basaltic rocks. Marine Geology, **73**, 47-59.

Jones, E.J.W., Perry, R.G. and Wild, J.L. 1988. Geology of the Hebridean margin of the Rockall Trough. Proceedings Royal Society of Edinburgh, **88B**, 27-51.

Jones, E.J.W., Perry, R.G., Wild, J.L. and Mauchline, J. 1986. Geology of the Hebridean margin of the Rockall Trough. In: The oceanography of the Rockall Channel. Royal Society of Edinburgh and Scottish Marine Biological Association, joint symposium, **88**, 27-52.

- Jones, E.J.W., Ramsay, A.T.S., Preston, N.J. and Smith, A.C.S. 1974. A Cretaceous guyot in the Rockall Trough. *Nature*, **251**, 129-131.
- Jones, E.J.W., Siddall, R., Thirlwall, M.F., Chroston, P.N. and Lloyd, A.J. 1994. Anton Dohrn seamount and the evolution of the Rockall Trough. *Oceanologica Acta*, **17**, 237-247.
- Jones, E.J.W., White, R.S., Hughes, V.J., Matthews, D.H. and Clayton, B.R. 1984. Crustal structure of the continental shelf off Northwest Britain from two ship seismic experiments. *Geophysics*, **49**, 1605-1621.
- Jones, R.W. and Mauchline, J. 1986. Distribution of morphogroups of Recent agglutinating foraminifera in the Rockall Trough; a synopsis. In: *The oceanography of the Rockall Channel*. Royal Society of Edinburgh and Scottish Marine Biological Association, joint symposium, **88**, 55-58.
- Joppen, M. and White, R.S. 1990. The structure and subsidence of Rockall Trough from two-ship seismic experiments. *Journal of Geophysical Research*, **95**, B12, 19821-19837.
- Joppen, M., White, R.S., Spence, G.D. and Westbrook, G.K. 1987. The seismic structure of Rockall Trough. American Geophysical Union, 1987 fall meeting, **68**, p 1372.
- Joron, J.L., Bougault, H., Maury, R.C., Bohn, M., and Desprairies, A. 1984. Strongly depleted tholeiites from the Rockall Plateau margin, North Atlantic: geochemistry and mineralogy. In: Roberts, D.G., Schnitker, D., *et al.* (Eds), *Initial Reports of the Deep Sea Drilling Program*, **81**. US Government Printing Office, Washington DC, 783-794.
- Jowitt, R., Hindle, A. and Rose, P. 1997. Petroleum systems analysis, west of Shetlands. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 231.
- Joy, A.M. 1992. Right place, wrong time: anomalous post-rift subsidence in sedimentary basins around the North Atlantic Ocean. In: Storey, B.C., Alabaster, T. and Pankhurst, R.J. (Eds), *Magmatism and the Causes of Continental Breakup*. Geological Society, London, Special Publication, **68**, 387-393.
- Kaltenback, A.J., Guennel, G.K., Lyons, W.B. *et al.* 1984. Analysis of organic matter from Leg 81, Deep Sea Drilling Project, Rockall Plateau. In: Roberts, D. G., Schnitker, D., *et al.* Initial reports of the Deep Sea Drilling Project, Vol. 81: Washington(U. S. Government printing office).
- Kanaris-Sotiriou, R., Morton, A.C. and Taylor, P.N. 1993. Palaeogene peraluminous magmatism, crustal melting and continental break-up: the Erlend complex, Faeroe-Shetland Basin, NE Atlantic. *Journal of the Geological Society, London*, **150**, 903-914.
- Keane, J.A. M.Sc. in progress. Stratigraphic and palynofacies assessment of the Kimmeridgian source rock interval of the Porcupine Basin. University College Cork.
- Keen, C., Peddy, C., de Voogd, B. and Matthews, D. 1989. Conjugate margins of Canada and Europe: Results from deep reflection profiling. *Geology*, **17**, 2, 173-176.
- Keigwin, L.D., Aubry, M.P. and Kent, D.V. 1987. North Atlantic Late Miocene stable-isotope stratigraphy, biostratigraphy, and magnetostratigraphy (DSDP Leg 94). Initial reports of the Deep Sea Drilling Project, **94**, Part 2. US Government Printing Office, Washington DC, 935-963.
- Keigwin, L.D. and Jones, G.A. 1989. Glacial-Holocene stratigraphy, chronology and palaeoceanographic observations on some North Atlantic sediment drifts. *Deep Sea Research*, **36**, 845-867.
- Kennedy, T. 1996. Cruise summary. ENAM 96 Pelagia 05-08-96 to 22-08-96. Unpublished report for Department of Transport, Energy and Communications - Petroleum Affairs Division, Irish Marine Data Centre, 22 pp.

- Kent, P.E. 1975. The tectonic development of Great Britain and the surrounding seas. In: Woodland, A.W. (Ed). Petroleum and the Continental Shelf of northwest Europe, **Vol. 1**. Applied Science Publishers, Barking, Essex, 1-28.
- Kent, P.E. 1978. Mesozoic vertical movements in Britain and the surrounding continental shelf. In: Bowes, D.R. and Leake, B.E.(Eds), Crustal Evolution in north-western Britain and adjacent regions. Steel House Press, Liverpool, 309-324.
- Kent, R.W. 1995. Magnesian basalts from the Hebrides, Scotland: chemical composition and relationship to the Iceland plume. *Journal of the Geological Society, London*, Vol. **152**, 979-984.
- Kenyon, N.H. 1986. Evidence from bedforms for a strong Poleward Current along the continental slope of Northwest Europe. *Marine Geology*, **72**, 187-198.
- Kenyon, N.H. 1987. Mass-wasting features on the continental slope of northwest Europe. *Marine Geology*, **74**, 57-77.
- Kenyon, N.H. 1997. North Atlantic floating university facility - the 1997 cruise. Report, 24 October 1997, 3pp. [www.unesco.org/ioc/news/items/1997/news136.html](http://www.unesco.org/ioc/news/items/1997/news136.html)
- Kenyon, N.H. 1997. Results of Training Through Research cruise. Abstract, Second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- Kenyon, N.H., Belderson, R.H. and Stride, A.H. 1978. Channels, canyons and slump folds on the continental slope between southwest Ireland and Spain. *Oceanologica Acta*, **1**, 369-380.
- Kenyon, N.H., Kuipers, A., Nielsen, T. and Taylor, J. 1998. Neogene seismic pattern and current pathways west of Faeroe Bank channel. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium.
- Kenyon, N.H. and Stride, A.H. 1970. The tide swept continental shelf. Sediments between the Shetland Isles and France. *Sedimentology*, **14**, 159-173.
- Kerr, J. Wm. and Fergusson, A.J. 1981. Geology of the North Atlantic Borderlands. Canadian Society of Petroleum Geology, Memoir No. 7.
- Keser-Neish, J.C. 1990. Rockall Trough: crustal structure of a complex environment from composite seismic surveys. 60th Annual SEG Int. Meeting (San Francisco, 9/23-27/90), Expanded Technical Program, Abstracts Biogr., **1**, 301-303.
- Keser-Neish, J.C. 1993. Seismic structure of the Hatton-Rockall area: an integrated seismic/modelling study from composite datasets. In: Parker, J.R. (Ed), Petroleum Geology of Northwest Europe: Proceedings of the 4th Conference. Geological Society, London, Special Publication, 2 vols., 1047-1056.
- Keser-Neish, J.C. and Francis, M.F. 1990. Comparative study of deep seismic imaging within the Rockall Trough. 60th Annual SEG Int. Meeting (San Francisco, 9/23-27/90), Expanded Technical Program, Abstracts Biogr. **1**, 185-188.
- Keser-Neish, J.C. and Francis, M.F. 1991. Rockall Trough: new images from deep seismic surveys, 104-105. 53rd EAEG meeting expanded abstracts, Florence.
- KFA 1977. Final geochemical report of 34/15-1, Porcupine Basin, offshore Ireland.
- Kidd, R.B. 1982. Long range sidescan sonar studies of sediment slides and the effects of slope mass sediment movement on abyssal plain sedimentation. In: Saxov, S. and Nieuwenhuis, J.K. (Eds), Marine slides and other mass movements, **6**, 289-303.
- Kidd, R.B. 1986. Sedimentation on mid-ocean sediment drifts.

- Kidd, R.B. 1987. Sedimentation of Feni and Gardar sediment drifts. Initial Reports of the Deep Sea Drilling Project, **94**. US Government Printing Office, Washington DC, 1217-1244.
- Kidd, R.B. 1991. Sedimentation and climate-induced sediments on Feni Ridge, northeast Atlantic Ocean.
- Kidd, R.B. and Hill, P.R. 1986. Sedimentation on mid-ocean sediment drifts. In: Summerhayes, C.P. and Shackleton, N.J. (Eds), North Atlantic Palaeoceanography. Geological Society, London, Special Publication, **21**, 87-102.
- Kidd, R.B. and Hill, P.R. 1987. Sedimentation on Feni and Gardar sediment drifts. Initial Reports of the Deep Sea Drilling Project, **94**. US Government Printing Office, Washington DC, 1217-1244.
- Kidd, R.B. and Roberts, D.G. 1982. Long-range sidescan sonar studies of large-scale sedimentary features in the north Atlantic. Bulletin Institute Géologie Bassin d'Aquitaine, **31**, 11-29.
- Kidd, R.B., Ruddiman, W.F., Dolan, J.F., Eggers, M.R., Hill, P.R., Keigwin, L.D., Mitchell, M., Philips, I., Robinson, F., Salehipour, S., Takayama, T., Thomae, E., Unsold, G. and Weaver, P.P.E. 1983. Sediment drifts and intraplate tectonics in the North Atlantic. Nature, **306**, 532-533.
- Kilenyi, T. and Standley, R. 1985. Petroleum prospects in the northwest seaboard of Scotland. Oil and Gas Journal, **84**, 100-108.
- King, R.E. 1977. European Atlantic margins; more drilling required. World Oil, **185**, 7, 59-66.
- King, R.E. 1979. New oil basins; an assessment of prospects. World Oil, **189**, 62-67.
- King, R.E. 1979. Petroleum exploration and production in Europe in 1978. American Association of Petroleum Geologists Bulletin, **63**, 10, 1915-1976.
- King, R.E. 1981. Some promising regions for offshore petroleum exploration. Ocean Industry, **16**, 10, 42-51.
- Kjørboe, L. 1997. Stratigraphic relationships of the Early Tertiary successions of the Faeroe basalt plateau and the Faeroe Basin. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 127.
- Kjørboe, L. and Petersen, S.A. 1995. Seismic investigation of the Faeroe basalts and their substratum. In: Scrutton, R.A., Stoker, M.S., Shimmield, G.B. and Tudhope, A.W. (Eds), The Tectonics, Sedimentation and Palaeoceanography of the North Atlantic Region. Geological Society, London, Special Publication, **90**, 111-122.
- Klemperer, S.L. 1989. Seismic reflection evidence for the location of the Iapetus Suture west of Ireland. Journal of the Geological Society, London, **146**, 409-412.
- Klemperer, S. and Hobbs, R. 1991. The BIRPS Atlas, deep seismic reflection profiles around the British Isles. Cambridge University Press, 124 pp.
- Klemperer, S.L. and Ryan, P.D. 1991. BIRPS west of Ireland deep reflection profiles (WIRE LINES). Journal of the Geological Society, London, **148**, 149-164.
- Klemperer, S.L., Ryan, P.D. and Snyder, D.B. 1991. A deep seismic reflection transect across the Irish Caledonides. Journal of the Geological Society, London, **148**, 149-164.
- Knappertsbusch, M. and Brummer, G.J.A. 1995. A sediment trap investigation of sinking coccolithophorids in the North Atlantic. Deep Sea Research, **42**, 1083-1109.



- Knott, S.D., Burchell, M.T., Jolley, E.J. and Fraser, A.J. 1993. Mesozoic to Cenozoic plate reconstructions of the North Atlantic and hydrocarbon plays of the Atlantic margins. In: Parker, J.R. (Ed), Petroleum Geology of Northwest Europe: Proceedings of the 4th Conference. Geological Society, London, Special Publication, 2 vols., 953-974.
- Knox, R.W.O' B. 1984. Nannoplankton zonation and the Palaeocene/Eocene boundary beds of NW Europe: an indirect correlation by means of volcanic ash layers. Journal of the Geological Society, London, **141**, 6, 993-999.
- Knox, R.W.O'B., Corfield, R.M. and Dunay, R.E. 1996. Correlation of the Early Paleogene in Northwest Europe. Geological Society, Special Publication, **101**, 488 pp.
- Knutz, P.C. 1998. Glaciomarine sedimentary cycles in the northern Rockall Trough, NE Atlantic margin. Abstract, Geoscience 1998, 14-18 April 1998, Keele University.
- Kolla, V. and Macurda, D.B. 1988. Sea-level changes and timing of turbidity-current events in deep-sea fan systems. In: Sea-level changes: an integrated approach. Society of Economic Palaeontologists and Mineralogists, Special Publication, **42**, 381-392.
- Krasheninnikov, V.A. and Bylinskay, M.E. 1994. Planktonic foraminifers and Pliocene-Quaternary stratigraphy of North Atlantic sediments. Stratigraphic Geology Correlation, **2**, 6, 605-615.
- Krasheninnikov, V.A. and Pflaumann, U. 1978. Zonal stratigraphy of Neogene deposits of the eastern part of the Atlantic Ocean by means of planktonic foraminifers, Leg 41, Deep Sea Drilling Project. In: Lancelot, Y. and Seibold, E. (Eds), Initial Reports of the Deep Sea Drilling Project, Vol. **41**, pp.613-658. Washington, U.S. Government Printing Office.
- Krumsiek, K., and Roberts, D.G. 1984. Palaeomagnetism of Tertiary sediments from the southwest Rockall Plateau, Deep Sea Drilling Project Leg 81. In: Roberts, D.G. and Schnitker, D. (Eds), Initial Reports of the Deep Sea Drilling Project, **81**, pp.837-854.. US Government Printing Office, Washington DC.
- Kuijpers, A., Andersen, M.S., Kenyon, N.H., Kunzendorf, H. and van Weering, T.C.E. 1998. Quaternary sedimentation and Norwegian Sea overflow pathways around Bill Bailey Bank, NE Atlantic. Marine Geology, ENAM Special Issue (in press).
- Kuszniir, N.J., Nadin, P.A. and Cheadle, M.J. 1997. Early Tertiary plume uplift of the North Sea and Faeroe-Shetland Basins. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 17.
- Laberg, J.S., Vorren, T.O., Kenyon, N.H., Evans, D., Henriksen, S. and Dowdeswell, J.A. 1997. Abstract, Second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- Laier, T., Nytoft, H.P., Jorgensen, O. and Isaksen, G.H. 1997. Hydrocarbon traces in the Tertiary basalts of the Faeroe Islands. Marine and Petroleum Geology, **143**, 257-266.
- Lallemand, S. and Sibuet, J.C. 1986. Tectonic implications of canyon directions over the Northeast Atlantic continental margin. Tectonics, **5**, 7, 1125-1143.
- Lamers, E., Bouma, A.E., Boyd, D., Carmichael, S., Cowper, D., Crook, C., Davies, K., Garnett, A., Hodges, S.P., Levell, B.K., Mitchener, B., Ochs, S., Parr, R. and Terwogt, D. 1997. The Palaeocene deep water sandstone play west of Shetland. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 105.
- Larner, K., Hatton, L., Hsu, I. And Gibson, B. 1978. Depth migration of complex offshore seismic profiles. Proceedings - Offshore Technology Conference, **10**, 2, 1083-1096.

- Larsen, H.C. 1988. A multiple and propagating rift model for the Northeast Atlantic. In: Morton, A.C. and Parson, L.M. (Eds), Early Tertiary volcanism and the opening of the Northeast Atlantic. Geological Society, London, Special Publication, **39**, 157-158.
- Larsen, H.C., Sawyer, D.S., and the NARM-DPG. 1991. North Atlantic rifted margins detailed planning group report. JOIDES Journal, **3**, 24-26.
- Larsen, M., Hamberg, L., Olaussen, S. and Stemmerik, L. 1997. The Kangerlussuaq Basin, East Greenland - an outcrop analogue to Cretaceous-Lower Tertiary basins offshore Norway and around the Faeroe Islands. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 59.
- Larsen, V.B. 1987. A synthesis of tectonically-related stratigraphy in the North Atlantic-Arctic region from Aalenian to Cenomanian time. Norsk Geologisk Tidsskrift, Vol. **67**, 281-293.
- Lassen, S. 1997. NE Atlantic circulation during the last 20,000 years; foraminiferal response. Abstract, second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- Latin, D. and White, N. 1990. generating melt during lithosphere extension: pure shear vs. simple shear. Geology, Vol. **18**, 327-331.
- Latouche, C. and Maillet, N. 1978. Mineralogy of samples of sites DSDP IPOD 398 (Leg 47B) and 403, 404, 405, 406 (Leg 48). Palaeoclimatic and palaeohydrologic implications. Bull. Soc. Geol. Fr., **20**, 4, 411-427.
- Latouche, C. and Maillet, N. 1984. X-ray mineralogy study of Tertiary deposits, DSDP Leg 81, Sites 552-555. In: Roberts, D. G., Schnitker, D., *et al.* Initial reports of the Deep Sea Drilling Project, Vol. 81: Washington(U. S. Government printing office).
- Latouche, C. and Maillet, N. 1990. Clay mineralogical evolution of NE Atlantic Cenozoic sediments. Paleohydrologic and paleoclimatic significance. Sciences Geologiques - Bulletin, 1990.
- Laughton, A.S. 1972. Joides deep boreholes. In: Discussion on the geology of Rockall Plateau. Proceedings of the Geological Society.
- Laughton, A.S. 1972. The South Labrador Sea - a key to the Mesozoic and early Tertiary evolution of the North Atlantic. In: Initial Reports of the Deep Sea Drilling Project, **12**, USPGO. Washington, 1155-1179.
- Laughton, A.S. 1975. Tectonic Evolution of the Northeast Atlantic Ocean: a review. Nor. Geol. Unders. Publ., **316**, 169-193.
- Laughton, A.S., Berggren, W.A., Benson, R., Davies, T.A., Franz, U., Musich, L., Perch-Nielsen, K., Ruffman, A., Van Hinte, J.E. and Whitmarch, R.B. 1970. Deep sea drilling project Leg 12. Geotimes, **15(9)**, 10-14.
- Laughton, A.S., Berggren, W.A., Benson, R.N., Davies, T.A., Franz, U., Musich, L.F., Perch-Nielsen, K., Ruffman, A.S., Van Hinte, J.E., Whitmarch, R.B., Aumento, F., Clarke, B.D., Cann, J.R., Ryall, P.J.C., Sabine, P.A., Benson, R.H., Cheetham, A.H., Haakansson, E. and Bukry, D. 1972. Sites 116 and 117. Initial Reports of the Deep Sea Drilling Program, **12**, US Government Printing Office, Washington DC, 395-671.
- Leach, H.M., Herbert, N., Los, A. and Smith, R.L. 1997. The Schiehallion Field. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, 119-120.
- Leahy, M.M. M.Sc. in progress. Petroleum geology studies in the Tertiary of the Porcupine Basin. University College Cork.

- Lee, M.K., Smith, I.F., Edwards, J.W.F. and Rollin, K.E. 1996. Techniques for basin identification on the Northwest UK -Faeroes continental margin from marine and satellite gravity data. 58th EAGE Conference (Amsterdam, Netherlands, 6/3-7/96) Extended Abstract Vol. 1, Paper M053.
- Lefort, J.P. 1989. Basement correlation across the North Atlantic. Springer, Berlin.
- Lefort, J.P. and Max, M.D. 1984. Development of the Porcupine Seabight: use of magnetic data to show direct relationship between early oceanic and continental structures. Journal of the Geological Society, London, **141**, 663-674.
- Le Pichon, X., Cressard, A., Mascle, J., Pautot, G. and Sichler, B. 1970. Structures sous-marines des bassins sédimentaires de Porcupine et de Rockall. Comptes Rendus de l'Académie des Sciences, Paris, **270**, 2902-2906.
- Le Pichon, X., Sibuet, J.C. and Francheteau, J. 1977. The fit of the continents around the north Atlantic Ocean. Tectonophysics, **38**, 169-209.
- Leslie, A., 1993. Shallow Plio-Pleistocene contourites on the Hebrides Slope, northwest U.K. continental margin. Sedimentary Geology, **82**, 61-78.
- Letolle, R., Grazzini, C.V. and Pierre, C. *et al.* 1979. Oxygen and carbon isotopes from bulk carbonates and foraminiferal shells at DSDP sites 400, 401, 402, 403 and 406. In: Montadert, L. and Roberts, D.G., Initial reports of the Deep Sea Drilling Project, Vol. **48**, Washington. (U.S. Government printing office).
- Levene, D.G. 1988. Maastrichtian/Palaeocene planktonic and agglutinating foraminifera from Shell/Agip 35/13-1, Porcupine Basin, Offshore West Ireland, 98. Unpublished M.Sc. thesis, University of Wales.
- Ling, H.Y. 1979. Radiolarians from the west flank of the Rekjanes Ridge, Deep Sea Drilling Project Leg 49. In: Luyendyk, B.P. & Cann, J.R. (Eds), Initial Reports of the Deep Sea Drilling Project, Vol. **49**, pp.583-588. Washinton, U.S. Government Printing Office.
- Long, D. and Morton, A.C. 1987. An ash fall within the Loch Lomond Stadial. Journal of Quaternary Science, **2**, 97-101.
- Lonsdale, P. 1981. Sediment drifts of the north-east Atlantic and their relationship to the observed abyssal currents. Bulletin Institut Géologie Bassin d'Aquitaine, **31-32**, 141-149.
- Lonsdale, P. and Spiess, F. N. 1977. Abyssal bedforms explored with a deeply towed instrument package. Marine Geology, **23**, 57-75.
- Lonsdale, P. and Hollister, C.D. 1979. A near bottom traverse of Rockall Trough: hydrographic and geologic inferences. Oceanologica Acta, **2**, 91-105.
- Lonsdale, P. and Vigneaux, M. 1982. Sediment drifts of the Northeast Atlantic and their relationship to the observed abyssal currents, Sedimentary environments of the North Atlantic during the Quaternary. Proceedings of the CNRS international colloquium No. **325**, 141-149.
- Loubere, P. 1987. Late Pliocene variations in the carbon isotope values of North Atlantic benthic foraminifera; biotic control of the isotopic record? Marine Geology, **76**, 45-56.
- Louis, P.R. and Mermey, P. 1979. An example of seismic stratigraphy. The Porcupine Basin - Western Ireland. Preprint of paper presented at SEG meeting, New Orleans.
- Louvel, V., Dymant, J. and Sibuet, J-C. 1997. Thinning of the Goban Spur continental margin and formation of early oceanic crust: constraints from forward modelling and inversion of marine magnetic anomalies. Geophysical Journal International, **128**, 188-196.

- Louvel, V., Sibuet, J.C., Whitmarsh, R.B., Horsefield, S J. and White, R.S. 1992. Gravity modelling of the Goban Spur Continental Margin (SW Ireland): consequences for the models of formation of non-volcanic rifted continental margins. *Compte Rendu Academie Scientifique, Paris, Series 2*, **315**, 11, 1333-1340.
- Louvel, V., Sibuet, J.C., Whitmarsh, R.B., Horsefield, S J. and White, R.S. 1993. Gravity modelling of the Goban Spur continental margin: constraints on models of formation. 7th Europe Union Geoscience Meeting (Strasbourg, France, 4/4-8/93) Paper, *Terra Abstracts, Supplement 1 to Terra Nova*, **5**, p. 726.
- Lowe, C. and Jacob, A.W.B. 1989. A north-south seismic refraction profile across the Caledonian suture zone in Ireland. *Tectonophysics*, **168**, 297-318.
- Lund, J. and Riegel, W., 1984. Petrography of degraded plant fragments from Paleocene - Eocene sediments of Deep Sea Drilling Project Leg 81, Site 555, Rockall Plateau. Initial reports of the Deep Sea Drilling Project, **81**. US Government Printing Office, Washington DC, 653-661.
- Lundin, E.R. and Doré, A.G. 1997. A tectonic model for the passive margin between the Rockall Trough and the Lofotens: Early Cretaceous to break-up. *Journal of the Geological Society, London*, **154**, 545-550.
- Luyendyk, B.P. and Cann, J.R. 1979. Initial Reports of the Deep Sea Drilling Project, **49**. US Government Printing Office, Washington DC.
- MacDonald, M., Allan, P.M. and Lovell, J.P.B. 1987. Geology of oil accumulation in Block 26/28, Porcupine Basin, offshore Ireland. In: Brooks, J. and Glennie, K. (Eds), *Petroleum Geology of North West Europe*. Graham and Trotman, London, 643-651.
- MacIntyre, R.M., McMenamin, T. and Preston, J. 1975. K-Ar results from Western Ireland and their bearing on the timing and siting of Thulean magmatism. *Scottish Journal of Geology*, **11**, 227-249.
- McCann, T., Shannon, P.M. and Moore, J.G. 1995. Fault styles in the Porcupine Basin, offshore Ireland: tectonic and sedimentary controls. In: Croker, P.F. and Shannon, P.M. (Eds), *The Petroleum Geology of Ireland's Offshore Basins*. Geological Society, London, Special Publication, **93**, 371-383.
- McCann, T., Shannon, P.M. and Moore, J.G. 1995. Fault patterns in the Cretaceous and Tertiary (end syn-rift, thermal subsidence) succession of the Porcupine Basin, offshore Ireland. *Journal of Structural Geology*, **17**, 201-214.
- McCave, I.N. 1994. Cruise report RRS Charles Darwin. Cruise 88, 25th July - 15th August 1994, Reykjavik to Ponta Delgada. North East Atlantic palaeoceanography and climate change research project of NERC. Department of Earth Sciences, University of Cambridge, Cambridge, 45 pp.
- McCave, I.N. 1995. Sedimentary processes and the creation of the stratigraphic record in the Late Quaternary North Atlantic Ocean. *Philosophical Transactions of the Royal Society of London*, **B348**, 229-241.
- McCave, I.N. and NEAPCC Investigators 1988. North East Atlantic palaeoceanography: a climate change-driven system in the late Quaternary. Abstract, Geoscience 1998, 14-18 April 1998, Keele University.
- McCave, I.N. and Tucholke, B.E. 1986. In: Vogt, P.R. and Tucholke, B.E. (Eds), *The Western North Atlantic Region* (Boulder, Colorado: Geological Society of America), 451-468.
- McCave, I.N., Lonsdale, P.F., Hollister, C.D. and Gardner, W.D., 1980. Sediment transport over the Hatton and Gardar contourite drifts. *Journal of Sedimentary Petrology*, **50**, 4, 1049-1062.
- McCave, I.N., Manighetti, B. and Beveridge, N.A.S. 1995. Circulation in the glacial North Atlantic inferred from grain-size measurements. *Nature*, **374**, 149-152.

- McCluskey *et al.* 1991. Geophysical Research Letters, **18**, 1901-1904.
- McCracken, J.N. 1991. Palaeogeography of the Mesozoic Jeanne d'Arc Basin, Grand Banks, Newfoundland, Canada. American Association of Petroleum Geologists Bulletin, **75**, 3, pp. 632.
- McCulloch, A.A. 1993. Apatite fission track results from Ireland and the Porcupine Basin and their significance for the evolution of the North Atlantic. Marine and Petroleum Geology, **10**, 572-590.
- McDonnell, A. and Shannon, P. 1998. The geological development of the Porcupine Basin. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium.
- McGeary, S., Cheadle, M.J., Warner, M.R. and Blundell, D.J. 1987. Crustal structure of the continental shelf around Britain derived from BIRPS deep seismic profiling. In: Brooks, J. and Glennie, K.W. (Eds), Petroleum Geology of North West Europe. Graham & Trotman, London, 33-41.
- McGrane, K., Readman, P.W., Jacob, A.W.B., Unnithan, V., Shannon, P.M., Keary, R. and Kenyon, N. 1997. Recent slope instability features in the Rockall Trough, offshore Ireland. UKGA-21, Abstracts of lectures and posters, Southampton, p40.
- McGrane, K., Unnithan, V., Vermeulen, N.J. *et al.* 1997. Recent erosional and depositional features in the sedimentary basins west of Ireland. EAGE 59<sup>th</sup> Conference. Extended Abstracts, **2**, Paper P525.
- McGrandle, A. 1994. The tectonic structure offshore Ireland derived from potential field data, 70-71. "The Petroleum Geology of Ireland's Offshore Basins" conference, Dublin, 21-22 April, 1994 - expanded abstracts.
- McMahon, T., Raine, R., Titov, O. and Boychuk, S. Some oceanographic features of Northeastern Atlantic waters west of Ireland. ICES Journal of Marine Science, **52**, 221-232.
- McQuillan, R. and Bacon, M. 1974. Preliminary report on seismic reflection surveys in the seas around Scotland. 1969-73. Institute of Geological Sciences Report No. 74/12, 7pp
- Macurda, D.B., Jr. 1986. Sedimentary fill and stratigraphic traps of Porcupine Basin, offshore Ireland. American Association of Petroleum Geologists Bulletin, **70**, 5, pp. 614.
- Macurda, D.B., Jr. and Bally, A.W. 1988. Seismic stratigraphic features of the Porcupine Basin, offshore Ireland. Atlas of seismic stratigraphy. American Association of Petroleum Geologists, Studies in Geology, **27**, 2, 240-246.
- Macurda, D.B., Jr. and Nelson, H.R., Jr. 1987. Interactive interpretation of a submarine fan, offshore Ireland; a case history. Expanded extracts of the 57<sup>th</sup> Annual International Society of Exploration Geophysicists meeting, 316-319.
- Macurda, D.B., Jr. and Nelson, H.R., Jr. 1988. Seismic stratigraphy and facies of a transitional continental rise, offshore Ireland. 58th Annual Society of Exploration Geophysics International Meeting (Anaheim, California, 10/30/88-11/3/88), Expanded Technical Program, Abstr. Biogr., **1**, 16-17.
- Macurda, D.B., Jr. and Nelson, H.R., Jr. 1988. Interactive interpretation of a submarine fan, offshore Ireland; a case history. Geophysics: The Leading Edge of Exploration, **7**, 10, 28-34.
- Macurda, D.B., Jr. and Nelson, H.R., Jr. 1989. Interactive interpretation of morphology of Upper Tertiary contourites, Porcupine basin, offshore Ireland [abstract]. American Association of Petroleum Geologists Bulletin, **73**, 384-385.
- Macurda, D.B., Jr., Bradford, J. and Nelson, H.R., Jr. 1987. Interactive interpretation of a submarine fan, offshore Ireland; a case history. Bulletin - Corpus Christi Geological Society 1987, **December**, 6.

- Macurda, D.B., Jr. Nelson, H.R., Jr. and Jones, G. 1993. The stratigraphy and Paleooceanography of Cretaceous carbonate buildups, Porcupine Basin, offshore Ireland. Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Palaeontologists and Mineralogists, pp. 143.
- Makris, J., Elgoff, R., Jacob, A.W.B., Mohr, P., Murphy, T. and Ryan, R. 1988. Continental crust under the Southern Porcupine Seabight, west of Ireland. *Earth and Planetary Science Letters*, **89**, 387-397.
- Makris, J., Ginzburg, A., Shannon, P.M., Jacob, A.W.B., Bean, C.J. and Vogt, U. 1991. A new look at the Rockall Region, offshore Ireland. *Marine and Petroleum Geology*, **8**, 410-416.
- Makris, J., Vogt, U., Jacob, A.W.B. and Hauser, F. 1993. The European margin between Ireland and the Iceland Basin. AGU Fall Meeting (San Francisco, 12/6-10/93) Poster S51a-21, *Eos, Transactions, American Geophysical Union*, **74**, 43 (Supplement), p. 444.
- Makris, J., Vogt, U., Shannon, P.M., Jacob, A.W.B., Hauser, F. and O' Reilly, B. 1993. The evolution of the western margin of the Eurasian plate under the northeastern Atlantic. *Annales Geophysicae*, **11**, p. C65.
- Manighetti, B. and McCave, I.N. 1995. Late glacial and Holocene palaeocurrents around Rockall Bank, NE Atlantic Ocean. *Paleoceanography*, **10**, 611-626.
- Mann, D.W. 1980. Scientific aspects of well logging in deep ocean drill sites on Leg 48 - Biscay and Rockall areas. In: Kent, P., Laughton, A.S., Roberts, D.G. and Jones, E.J.W. (Eds), *The evolution of passive continental margins in the light of recent deep drilling results. Philosophical Transactions of the Royal Society of London, Series A: Mathematical and Physical Sciences*, **294**, 1409, 105-119.
- Manspeizer, W. 1988. Triassic-Jurassic rifting and opening of the North Atlantic: an overview. In: Manspeizer, W. (Ed), *Triassic-Jurassic rifting, continental breakup and origin of the Atlantic Ocean and passive margins, Part A. Development in Geotectonics*, **22**, 41-80.
- Manum, S.B., Gunnarsdottir, H., Rangnes, K., Scholze, A. and Boulter, M.C. 1989. Eocene to Miocene palynology of the Norwegian Sea (ODP Leg 104). *Proceedings of the Ocean Drilling Program, Initial Reports*, **104**. US Government Printing Office, Washington DC, 611-662.
- Margesson, R.W. and Sondergeld, C.H. 1997. Anisotropy and AVO: a case history from WOSI. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 107.
- Martini, E. 1971. Standard Tertiary and Quaternary calcareous nannoplankton zonation. 739-785 in: Farinacci, A (Ed). *Proceedings of the Second Planktonic Conference, Roma*, **2**. (Roma: Edizioni Tecnoscienza).
- Maslin, M.A., Shackleton, N.J. and Pflaumann, U. 1995. Surface water temperature, salinity and density changes in the NE Atlantic during the last 45,000 years: Heinrich events, deep water formation and climatic rebounds. *Paleoceanography*, **10**, 527-544.
- Masson, D.G. 1982. Regional aspects of IPOD LEG 80 drilling. *Eos, Transactions, American Geophysical Union*, **63**, 51, p. 1276.
- Masson, D.G. and Kidd, R.B. 1986. Revised seismic stratigraphy of the southern Rockall Trough. In: Ruddiman, W.F. and Kidd, R.B. *et al.* Initial report Deep Sea Drilling Project, **94**, 1117-1126.
- Masson, D.G. and Kidd, R.B. 1986. Revised Tertiary seismic stratigraphy of the southern Rockall Trough. In: Ruddiman, W.F., Kidd, R.B., Thomas, E., *et al.* (Eds), *Initial reports of the Deep Sea Drilling Project*, **48**. US Government Printing Office, Washington DC, 1115-1139.

- Masson, D.G. and Kidd, R.B. 1986. Revised Tertiary stratigraphy of the southern Rockall Trough. In: Ruddiman, W.F. and Kidd, R.B. *et al.* Initial reports of the Deep Sea Drilling Project, **80**. Washington (U.S. Government printing office). 1115-1139.
- Masson, D.G. and Miles, P.R. 1986. Development and hydrocarbon potential of Mesozoic sedimentary basins around margins of North Atlantic. American Association of Petroleum Geologists Bulletin, **70**, 721-729.
- Masson, D.G. and Miles, P.R. 1986. Structure and development of Porcupine Seabight sedimentary basin, offshore southwest Ireland. American Association of Petroleum Geologists Bulletin, **70**, 536-548.
- Masson, D.G. and Parson, L.M. 1983. Eocene deformation on the continental margin SW of the British Isles. Journal of the Geological Society, London, **140**, 6, 913-920.
- Masson, D.G. and Roberts, D.G. 1981. Late Jurassic - Early Cretaceous reef trends on the Continental Margin SW of the British Isles. Journal of the Geological Society, London, **138**, 437-443.
- Masson, D.G. *et al.* 1990. RRS Charles Darwin Cruise 52, 25 Aug-13 Sept 1990. Multichannel seismic reflection survey of the southern margin of the Rockall Plateau. UK Natural Environmental Research Council, IOS - Cruise report.
- Masson, D.G., Montadert, L. and Scrutton, R.A. 1984. Regional geology of the Goban Spur continental margin. In: De Graciansky, P.C., Poag, C.W. *et al.* (Eds), Initial reports of the Deep Sea Drilling Project. US Government Printing Office, Washington DC, **80**, 1115-1139.
- Masson, D.G., Parson, L.M. and Miles, P.R. 1984. Structure and evolution of the SW approaches and Grand Banks Continental Margins. Institute of Oceanographic Sciences Report, **189**, 43pp.
- Masson, D.G., Cartwright, J.A., Pinheiro, L.M., Whitmarsh, R.B., Beslier, M-O and Roeser, H. 1994. Compressional deformation at the ocean-continent transition in the NE Atlantic. Journal of the Geological Society, London.
- Masson, D.G., Dobson, M.R., Auzende, J-M., Cousin, M., Coutelle, A., Rolet, J. and Vaillant, P. 1989. Geology of Porcupine Bank and Goban Spur, Northeastern Atlantic - preliminary results of the CYAPORC submersible cruise. Marine Geology, **87**, 105-119.
- Masson, D.G., Miles, P.R., Max, M.D., Scrutton, R.A. and Inamdar, D.D. 1985. A free-air gravity anomaly map of the Irish continental margin and a new gravity model across the southern Porcupine Seabight. Geological Survey of Ireland, Report Series, RS B85/4.
- Masson, F., Jacob, A.W.B., Prodehl, C., Readman, P.W., Shannon, P.M., Schulze and Underle, U. A wide-angle seismic traverse through the variscan of SW Ireland. Geophysical Journal International.
- MAST. 1997. Marine Science and Technology Programme (MAST III) Projects. [www.Europa.eu.int/comm/dg12/marine/pr-5.html](http://www.Europa.eu.int/comm/dg12/marine/pr-5.html), 2pp.
- MAST. 1997. MAST III - Poseidon, overview. [www.soc.soton.ac.uk/CHD/poseidon/overview.html](http://www.soc.soton.ac.uk/CHD/poseidon/overview.html), 5 pp.
- Mauchline, J. 1986. The oceanography of the Rockall Channel. Royal Society of Edinburgh and Scottish marine Biological Association, joint symposium; The oceanography of the Rockall Channel, **88**, 1-356.
- Max, M.D. 1978. Tectonic control of offshore sedimentary basins to the north and west of Ireland. Journal of Petroleum Geology, **1**, 103-110.
- Max, M.D. 1986. The three phase development of the Porcupine Seabight: basin formation and the structurally dependent sedimentary pattern. Journal of Petroleum Geology, **10**, 1, 59-72.
- Max, M.D., Inamdar, D.D. and MacIntyre, T. 1982. Compilation magnetic map: the Irish continental shelf and adjacent areas. Geological Survey of Ireland Report Series, RS 82/2, 7 pp.

- Meadows, N.S., Macchi, L., Cubitt, J.M. and Johnson, B. 1987. Sedimentology and reservoir potential in the west of Shetland, UK exploration area. In: Brooks, J. and Glennie, K. (Eds), *Petroleum geology of North West Europe*. Graham and Trotman, London, 723-736.
- Megson, J.B. 1981. Crustal structure of the continental margin west of the U.K. and Ireland. In lecture notes accompanying one day meeting on 'Geology and Geophysics of the U.K. and Irish continental shelf - Goban Spur to Rockall Bank'. B1-B22.
- Megson, J.B. 1983. Marine geophysical investigations: Rockall Trough to the Porcupine Seabight. Unpublished PhD thesis, Edinburgh University.
- Megson, J.B. 1987. The evolution of the Rockall Trough and implications for the Faeroe-Shetland Trough. In: Brooks, J. and Glennie, K. (Eds), *Petroleum Geology of North West Europe*. Graham and Trotman, London, 653-665.
- Merriman, R.J., Taylor, P.N. and Morton, A.C. 1988. Petrochemistry and isotope geochemistry of early Paleogene basalts forming the dipping reflector sequence SW of Rockall Plateau, NE Atlantic. In: Meyerhoff, A.A. 1974. Crustal structure of Northern North Atlantic Ocean; A Review, Plate Tectonics; assessments and reassessments. *Memoir - American Association of Petroleum Geologists*, **23**, 423-433.
- Mienert, J. 1997. Gas hydrate drilling on the mid-Norwegian margin. Abstract, Second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- Miles, P.R. and Roberts, D.G. 1981. The magnetisation of Rosemary Bank Seamount, Rockall Trough, north-east Atlantic. *Earth and Planetary Science Letters*, **54**, 442-448.
- Miller, J.A. and Mohr, P.A. 1965. Potassium-argon determinations on rocks from St Kilda and Rockall. *Scottish Journal of Geology*, Vol. **1**, 93-99.
- Miller, J.A., Matthews, D.H. and Roberts, D.G. 1973. Rock of Grenville age from Rockall Bank. *Nature, Physical Science*, **246**, p. 61.
- Miller, J.A., Roberts, D.A. and Dearnley, R. 1973. Precambrian rocks drilled from the Rockall Bank. *Nature*, **244**, 21-23.
- Miller, K.G., Curry, W.B. and Ostermann, D.R., 1985. Late Paleogene (Eocene to Oligocene) benthic foraminiferal oceanography of the Goban Spur region, DSDP Leg 80. Initial Reports of the Deep Sea Drilling Project, **80**, Part 2. US Government Printing Office, Washington DC, 1081-1099.
- Miller, K.G., Mountain, G.S. and Tucholke, B.E. 1985. Oligocene glacio-eustacy and erosion on the margins of the North Atlantic. *Geology*, **13**, 10-13.
- Minshull, T.A. 1993. Poisson's ratio of a seaward-dipping reflector series, Hatton Bank. *Geophysical Journal International*, **115**, 332-335.
- Mitchell, K. 1997. A sequence stratigraphic interpretation of Lower Tertiary sedimentation, Porcupine Basin, west of Ireland. <http://glsun2.gl.rhbnc.ac.uk/MS/Mitchell.html>, 1 p.
- Mitchell, S.M., Beamish, G.W.J., Wood, M.V., Malakek, S.J., Armentrout, J.A., Damuth, J.E. and Olson, H.C. 1993. Palaeocene sequence framework of the Faeroe Basin. In: Parker, J.R. (Ed), *Petroleum Geology of Northwest Europe*. Proceedings of the 4th Conference. Geological Society, London, Special Publication, 2 vols., 1011-1024.
- Mitchellmore, L., Chessell, J., Norvick, M. and Thomas, C. 1997. The Porcupine Basin: Ireland's missed oil province? Paper presented at AAPG Convention in Vienna, September, 1997.
- Molloy, J. and Fernandes, P. 1994. Acoustic surveys off the west coast of Ireland.



Molnia, B.F. 1983. Glacial-marine sedimentation. Plenum, New York.

Molnia, B.F. 1983. Distal glacial-marine sedimentation: abundance, composition and distribution of north Atlantic Ocean Pleistocene ice-rafted sediment. In: Molnia, B.F. (Ed), Glacial-marine Sedimentation. Plenum, New York, 593-629.

Montadert, L., De Charpal, O., Roberts, D., Guennoc, P. and Sibuet, J.C. 1979. Northeast Atlantic passive continental margins: rifting and subsidence processes. In: Talwani, M., Hay, W. and Ryan, W.B.F. (Eds), deep drilling results in the Atlantic Ocean: continental margin and palaeoenvironment, Maurice Ewing Series, **3**, 154-186.

Montadert, L., Roberts, D.G., Auffret, G.A. *et al.* 1977. Rifting and subsidence on passive continental margins in the North East Atlantic. *Nature*, **268**, 305-309.

Montadert, L., Roberts, D.G., Auffret, G.A. *et al.* 1979. Initial Reports of the Deep Sea Drilling Program, **48**. US Government Printing Office, Washington DC, pp1183.

Monteiro, J.M. 1970. Geology of the East Atlantic continental margin from Finisterre to Casablanca. Institute of Geological Sciences report 70/15, 92-106.

Moore, J.G. 1992. A syn-rift to post-rift transition sequence in the Main Porcupine Basin, offshore western Ireland. In: Parnell, J. (Ed), Basins on the Atlantic Seaboard: Petroleum geology, sedimentology and basin evolution. Geological Society, London, Special Publication, **62**, 333-349.

Moore, J.G. 1993. Seismic and sequence-stratigraphic study of the Cretaceous and Tertiary successions of the Porcupine Basin, offshore Ireland. Unpublished Ph.D. thesis, University College Dublin.

Moore, J.G. and Shannon, P.M. 1990. Cretaceous and Tertiary seismic stratigraphy, Porcupine Basin, offshore Ireland. Thirteenth International Sedimentological Congress, Nottingham. Abstracts. p. 158.

Moore, J.G. and Shannon, P.M. 1991. Slump structures in the Late Tertiary of the Porcupine Basin, offshore Ireland. *Marine and Petroleum Geology*, **8**, 184-97.

Moore, J.G. and Shannon, P.M. 1992. Palaeocene-Eocene deltaic sedimentation, Porcupine Basin, offshore Ireland: a sequence stratigraphic approach. *First Break*, **10**, 461-469.

Moore, J.G. and Shannon, P.M. 1992. A seismic and sequence stratigraphic study of the Cretaceous and Tertiary development of the Porcupine basin, offshore Ireland. Abstracts, European Association of Petroleum Geoscientists, 3rd Annual Conference, Paris. p. 39.

Moore, J.G. and Shannon, P.M. 1994. Late Cretaceous Chalk: facies distribution and hydrocarbon prospectivity in the Porcupine Basin, offshore Ireland. Abstracts, The Petroleum Geology of Ireland's Offshore Basins, Dublin. 44-45.

Moore, J.G. and Shannon, P.M. 1995. The Cretaceous succession in the Porcupine Basin, offshore Ireland: facies distribution and hydrocarbon potential. In: Croker, P.F. and Shannon, P.M. (eds), The Petroleum Geology of Ireland's Offshore Basins. Geological Society, London, Special Publication, **93**, 345-370.

Morgan, J.V. and Barton, P.J. 1988. A geophysical study of the Hatton Bank volcanic margin: a summary of the results from a combined seismic, gravity and magnetic experiment. *Tectonophysics*, **173**, 1-4, 517-526.

Morgan, J.V., Barton, P.J. and White, R.S. 1989. The Hatton Bank continental margin - III. Structure from wide-angle OBS and multichannel seismic refraction profiles. *Geophysical Journal International*, **98**, 367-384.

- Morton, A.C. 1984. Heavy minerals from Paleogene sediments, DSDP Leg 81: their bearing on stratigraphy, sediment provenance, and the evolution of the North Atlantic. Initial reports of the Deep Sea Drilling Project, **81**. US Government Printing Office, Washington DC, 653-661.
- Morton, A.C. and Keene, J.B., 1984. Paleogene pyroclastic volcanism in the South-West Rockall Plateau.
- Morton, A.C. and Parson, L.M.(Eds). 1988. Early Tertiary volcanism and the opening of the NE Atlantic. Geological Society, London, Special Publication, **39**.
- Morton, A.C. and Taylor, P.N. 1987. Lead isotope evidence for the structure of the Rockall dipping-reflector passive margin. *Nature*, **326**, 6111, 381-383.
- Morton, A.C. and Taylor, P.N. 1991. Geochemical and isotopic constraints on the nature and age of basement rocks from Rockall Bank, NE Atlantic. *Journal of the Geological Society, London*, **148**, 631-634.
- Morton, A.C., Backman, J. and Harland, R. 1983. A reassessment of the stratigraphy of DSDP Hole 117 A, Rockall Plateau: Implications for the Palaeocene - Eocene boundary in N.W. Europe. *Newsl. Stratigr.*, **12**, 2, 104-111.
- Morton, A.C., Merriman, R.J. and Mitchell, J.G., 1984. Genesis and significance of glauconitic sediments of the South-West Rockall.
- Morton, A.C., Dixon, J.E., Fitton, J.G., MacIntyre, R.M., Smythe, D.K. and Taylor, P.N. 1988. Early Tertiary volcanic rocks in Well 163/6-1A, Rockall Trough. In: Morton, A.C. and Parson, L.M. (Eds), Early Tertiary volcanism and the opening of the NE Atlantic. Geological Society, London, Special Publication, **39**, 293-308.
- Morton, A.C., Evans, D., Harland, R., King, C. and Ritchie, D.K. 1988. Volcanic ash in a cored borehole west of the Shetland Islands: evidence for Selandian - late Palaeocene volcanism in the Faeroes region. In: Morton, A.C. and Parson, L.M. (Eds), Early Tertiary volcanism and the opening of the NE Atlantic. Geological Society, London, Special Publication, **39**, 263-271.
- Morton, A.C., Hitchen, K., Ritchie, J.D., Hine, N.M., Whitehouse, M. and Carter, S.G. 1995. Late Cretaceous basalts from Rosemary Bank, northern Rockall Trough. *Journal of the Geological Society, London*, **152**, 947-952.
- Morton, N. 1987. Jurassic subsidence history in the Hebrides, NW Scotland. *Marine and Petroleum Geology*, **4**, 226-242.
- Morton, N. 1989. Jurassic sequence stratigraphy in the Hebrides Basin, NW Scotland. *Marine and Petroleum Geology*, **6**, 243-260.
- Morton, N. 1992. Late Triassic to Middle Jurassic stratigraphy, palaeogeography and tectonics west of the British Isles. In: Parnell, J. (Ed), Basins on the Atlantic Seaboard: petroleum geology, sedimentology and basin evolution. Geological Society, London, Special Publication, **62**, 53-68.
- Morton, N. 1992. Dynamic stratigraphy of the Triassic and Jurassic of the Hebrides Basin, NW Scotland. In: Parnell, J. (Ed), Basins on the Atlantic Seaboard: petroleum geology, sedimentology and basin evolution. Geological Society, London, Special Publication, **62**, 97-110.
- Morton, N. 1993. Potential reservoir and source rocks in relation to Upper Triassic to Middle Jurassic sequence stratigraphy, Atlantic margin basins of the British Isles. In: Parker, J.R. (Ed), Petroleum Geology of Northwest Europe: Proceedings of the 4th conference. *Journal of the Geological Society, London*, 285-297.
- Morton, N., Smith, R.M., Golden, M. and James, A.V. 1987. Comparative stratigraphic study of Triassic-Jurassic sedimentation and basin evolution in the northern North Sea and north-west of the

- British Isles. In: Brooks, J. and Glennie, K. (Eds), Petroleum Geology of North West Europe. Graham and Trotman, London, 697-709.
- Mould, A.S., Royles, C.P., Smith, I.F. and Hitchen, K. 1997. Geophysical Image Atlas, Volume **11M**: Hatton Bank (Magnetics), British Geological Survey (Edinburgh).
- Mould, A.S., Smith, I.F., Edwards, J.W.F., Hitchen, K., Evans, J. R., Lee, M.K., Strachan, P., Williamson, J.P. and Pharaoh, T.C. 1995. Geophysical Image Atlas, Volume **10G**: Hebrides-Rockall (Gravity), British Geological Survey (Edinburgh).
- Mould, A.S., Smith, I.F., Hitchen, K. and Evans, J.R. 1996. Geophysical Image Atlas, Volume **11G**: Hatton Bank (Gravity), British Geological Survey (Edinburgh).
- Mudge, D.C. and Rashid, B. 1987. The geology of the Faeroe basin area. In: Brooks, J. and Glennie, K. (Eds), Petroleum geology of North West Europe. Graham and Trotman, London, 751-763.
- Muir, R.J., Fitches, W.R. and Maltman, A.J. 1994. The Rhinns Complex: Proterozoic basement on Islay and Colonsay, Inner Hebrides, Scotland and on Inishtrahull, NW Ireland. Transactions of the Royal Society of Edinburgh: Earth Sciences, Vol. **85**, 77-90.
- Müller, C. 1976. Tertiary and Quaternary calcareous nannoplankton in the Norwegian-Greenland Sea, Deep Sea Drilling Project Leg 38. In: Talwani, M. and Udintsev, G. (Eds), Initial Reports of the Deep Sea Drilling Project, Vol. **38**, pp.823-842. Washington, U.S. Government Printing Office.
- Müller, C. 1978. Remarks on biostratigraphic useful nannofossils in the Palaeogene of the northern hemisphere. Newsl. Stratigr., **7**, 1, 45-52.
- Müller, C. 1985. Biostratigraphic and palaeoenvironmental interpretation of the Goban Spur region based on a study of calcareous nannoplankton. In: Graciansky, P.C. and Poag, C.W. (Eds), Initial Reports of the Deep Sea Drilling Project, **80**. US Government Printing Office, Washington DC, 573-600.
- Murphy, N.J. 1994. Porcupine correlation project. "The Petroleum Geology of Ireland's Offshore Basins" conference, Dublin, 21-22 April, 1994 - expanded abstracts. P.A.D.
- Murphy, N.J. and Croker, P.F. 1991. Technical review of Erris and Slyne Troughs, offshore Northwest Ireland. Petroleum Affairs Division, Department of Energy, Dublin, 27 pp., 9 enclosures.
- Murphy, N.J. and Croker, P.F. 1992. Many play concepts seen over wide area in Erris, Slyne Troughs off Ireland. Oil and Gas Journal, **90**, 37, 92-97.
- Murray, J.W., 1984. Biostratigraphic value of *Bolboforma*, Leg 81, Rockall Plateau. In: Roberts, D. G., Schnitker, D., *et al.* Initial reports of the Deep Sea Drilling Project, Vol. 81: Washington(U. S. Government printing office).
- Murray, J.W. and Taplin, C.M. 1984. Larger agglutinated foraminifera from the Faeroe Channel and Rockall Trough collected by W.B. Carpenter. Journal of Micropalaeontology, **3**, 59-62.
- Murray, J.W. and Weston, J.F., 1984. Paleogene and Neogene benthic foraminifers from Rockall Plateau.
- Murray, J.W., Haddon, C.A., Powell, A.D.J. and Weston, J.F. 1984. Miocene to Recent bottom water masses of the north-east Atlantic: an analysis of benthic foraminifera. In: Summerhayes, C.P. and Shackelton, N.J. (Eds), North Atlantic Palaeoceanography. Geological Society, London, Special Publication, **21**, 219-231.
- Musgrove, F.W., Murdoch, L.M. and Lenehan, T. 1994. The Variscan fold-thrust belt and its control on early Mesozoic extension and deposition. Proceedings of The Petroleum Geology of Ireland's Offshore Basins Conference, 12-13.

- Musgrove, F.W. and Mitchener, B. 1995. A structural history of the Rockall Trough, west of Britain. 57th EAGE Conference (Glasgow, Scot, 5/29/95-6/2/95) Extended Abstract, Paper E013, Vol. 2.
- Musgrove, F.W. and Mitchener, B. 1996. Analysis of the pre-Tertiary rifting history of the Rockall Trough. *Petroleum Geoscience*, **2**, 353-360.
- Musgrove, F.W., Murdoch, L.M. and Lenehan, T. 1995. The Variscan fold-thrust belt of SE Ireland and its control on early Mesozoic extension and deposition: a method to predict the Sherwood Sandstone. In: Croker, P.F. and Shannon, P.M. (eds), *The Petroleum Geology of Ireland's Offshore Basins*. Geological Society London, Special Publication, **93**, 81-100.
- Musset, A.E., Dagley, P. and Skelhorn, R.R. 1988. Time and duration of activity in the British Tertiary Igneous Province. In: Morton, A.C. and Parson, L.M. (eds.) *Early Tertiary volcanism and the opening of the NE Atlantic*. Geological Society, London, Special Publication, **39**, 337-348.
- Myers, J.S. 1980. Structure of the coastal dyke swarm and associated plutonic intrusions of East Greenland. *Earth and Planetary Science Letters*, **46**, 3, 407-418.
- Nadin, P. 1995. Cretaceous-Tertiary post-rift subsidence across the NE Atlantic margin: an analysis using quantitative 2-D forward and reverse stratigraphic modelling. Ph.D. Thesis, University of Liverpool.
- Nadin, P., Houchen, M. and Kuznir, N. 1997. Evidence for pre-Cretaceous rifting in the Rockall Trough: an analysis using quantitative 2-D structural and stratigraphic modelling. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, 95-96.
- Nadin, P.A., Kuznir, N.J. and Cheadle, M.J. In Press. Early Tertiary plume uplift of the North Sea and Faeroe-Shetland Basin. *Earth and Planetary Science Letters*.
- Naylor, D. 1972. The hydrocarbon potential of Western Britain and Ireland. *North Sea Conferences 1 & 2*, IPC Industrial Press, 130-137.
- Naylor, D. 1992. The post-Variscan history of Ireland. In: Parnell, J. (Ed), *Basins on the Atlantic Seaboard: Petroleum Geology, Sedimentology and Basin Evolution*. Geological Society, London, Special Publication, **62**, 255-275.
- Naylor, D. 1996. History of oil and gas exploration in Ireland. In: Glennie, K. and Hurst, A. (eds) *AD1995: NW Europe's Hydrocarbon Industry*. Geological Society, London, 43-52.
- Naylor, D. and Anstey, N.A. 1987. A reflection seismic study of the Porcupine Basin, offshore West Ireland. *Irish Journal of Earth Sciences*, **8**, 187-210.
- Naylor, D. and Mounteney, S.N. 1975. *Geology of the North-West European continental shelf*. Graham, Trotman, Dudley, London, 162 pp.
- Naylor, D. and Shannon, P.M. 1982. *The geology of offshore Ireland and West Britain*, Graham and Trotman, London, 161 pp.
- Naylor, D. and Shannon, P.M. 1990. *The Hydrocarbon Potential of Ireland - onshore and offshore*. ERA Ltd, Dublin, Ireland, **1 & 2**, 99 pp.
- Naylor, P.H., Bell, B.P., Durnall, P., Fredsted, R. and Jolley, D.W. 1997. The interplay between magmatic events and Palaeocene basin evolution along the Atlantic Margin. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 101.
- Neish, J.C.K. 1990. Rockall Trough: crustal structure of a complex environment from composite seismic studies. *Society of Economic Geology Abstracts*, **60**, 301-303.

- Neish, J.K. 1992. Seismic structure of the Hatton-Rockall area: an integrated seismic/modelling study from composite datasets.
- Neish, J.K. and Francis, M. 1992. Deep seismic imaging within the Rockall Trough. Modelling and migration to integrate processing and interpretation. Norwegian Petroleum Society, Seismic Processing & Interpretation: The Integrated Approach Conference (Kristiansand, Norway, March 1992), Expanded Abstracts, 9a-9f.
- Neish, J.K. and Malcolm, F. 1991. Rockall Trough: new images from deep seismic surveys. 53rd EAEG Meeting (Florence, Italy, May 1991), Technical Programme & Papers, Abstract, 104-105.
- Newall, V. 1973. Rockall - where geophysics may prove oil. *Ocean Industry*, **8** (4), 165-167.
- Newcastle Research Group. 1992. Report on the organic geochemical analysis of cuttings and core material from Well 27/13-1. University of Newcastle upon Tyne.
- Nezlina, C. 1997. Preliminary results from micropalaeontological studies in core MD01 (Celtic Margin). Abstract, second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- Nilsen, T.H. 1978. Sedimentation in the Northeast Atlantic Ocean and Norwegian Sea. In: Bowes, D.R. and Leake, B.E. (eds), *Crustal evolution in northwestern Britain and adjacent regions*. Geological Journal, Special Issue, **10**, 433-454.
- Noroil. 1988. Exploration developments. *Noroil*, **16**, 10, p. 36.
- Norris, S. 1986. Current meter observations near the Porcupine Bank 1981-1983. ODP Shipboard Scientific Party. 1996. Exploring the volcanic-rifted margins of the North Atlantic. *Eos, Transactions, American Geophysical Union*, **77**, 165-168.
- O'Callaghan, M. 1988. Petroleum prospects of offshore Ireland. *Petroleum Review*, **42**, 498, 33-35.
- O'Connor, C.T. M.Sc. in progress. Palynofacies and palaeo-environmental analysis of the Triassic rocks offshore Ireland. University College Cork.
- O'Driscoll, D., Holcombe, B.B., Rose, P.T. and Jones, D.J. 1995. Cretaceous and Tertiary unconformities in the Atlantic margin basins. In: Croker, P.F. and Shannon, P.M. (Eds), *The petroleum geology of Ireland's offshore basins*. Geological Society, London, Special Publication, **93**, p. 341.
- Oil Search 1996. Seepfinder survey report, Rockall Trough
- O'Leary, E. 1996. Preliminary results of sediment flux studies across the shelf break, Central Rockall Trough. ENAM II. [www.ucc.ie/ucc/research/crc/enam2.htm](http://www.ucc.ie/ucc/research/crc/enam2.htm), 6pp.
- Olivet, J.L. 1996. Kinematics of the Iberian Plate (La Cinématique de la Plaque Iberique). *Bulletin Centres Recherche Exploration-Production Elf Aquitaine*, **20**, 1, 131-195.
- Olivet, J. L. Le Pichon, X. Monti, S. and Sichter, B. 1974. Charlie Gibbs fracture zone. *Journal of Geophysical Research*, **79**, 14, 2059-2072.
- Omran, M.A. 1990. Geophysical studies in the Hebrides Terrace Seamount area. PhD thesis. University College of Wales, Aberystwyth.
- Omran, M.A. and Whittington, R.J. 1989. Geophysical studies of part of the eastern margin of Rockall Trough. *Geophysical Journal*, **96**, 3, p. 580.
- O'Reilly, B.M. *et al.* 1991. *Journal of the Geological Society*, **148**, 191-195.

- O'Reilly, B.M., Hauser, F., Jacob, A.W.B., Shannon, P.M. and Makris, J. 1993. Evolution of the upper mantle beneath stretched continental crust: an example from the Rockall Trough. *Eos, Transactions, American Geophysical Union*, **74**, p. 444.
- O'Reilly, B.M., Hauser, F., Jacob, A.W.B. and Shannon, P.M. 1994. Seismic properties of extended continental lithosphere and their petrological implications: an example from the Rockall Trough. *American Geophysical Union 1994 Fall Meeting, San Francisco, Eos*, **75**, 644.
- O'Reilly, B.M., Hauser, F., Jacob, A.W.B. and Shannon, P.M. 1994. Seismic properties of extended continental lithosphere and their petrological implications: an example from the Rockall Trough. *Abstracts, Annual Irish Geology Research Meeting, Sligo*, 45-46.
- O'Reilly, B.M., Hauser, F., Jacob, A.W.B., Shannon, P.M., Makris, J. and Vogt, U. 1995. The Erris and Eastern Rockall Troughs: structural and sedimentological development. *Abstracts, The Petroleum Geology of Ireland's Offshore Basins, Dublin*, 50-51.
- O'Reilly, B.M., Hauser, F., Jacob, A.W.B., Shannon, P.M., Makris, J. and Vogt, U. 1995. The Erris and Eastern Rockall Troughs: structural and sedimentological development. In: Croker, P.F. and Shannon, P.M. (Eds), *The petroleum geology of Ireland's offshore basins*. Geological Society, London, Special Publication, **93**, 413-421.
- O'Reilly, B.M., Hauser, F., Jacob, A.W.B., Shannon, P.M., Makris, J. and Vogt, U. 1995. The transition between the Erris and the Rockall Basins: new evidence from wide-angle seismic data. *Tectonophysics*, **241**, 143-163.
- O'Reilly, B.M., Hauser, F., Jacob, A.W. B. and Shannon, P.M. 1996. The lithosphere below the Rockall Trough: wide-angle seismic evidence for extensive serpentinisation. *Tectonophysics*, **255**, 1-23.
- O'Reilly, B.M., Hauser, F., Jacob, A.W.B., Shannon, P.M., Markis, J., and Vogt, U. 1996. Wide-Angle Seismics: a key to understanding the geological development of the North Atlantic. In: Keegan, B.F., and O'Connor, R. (eds) *Irish Marine Science 1995*, Galway University Press Ltd., 475-484.
- O'Reilly, B.M., Readman, P.W. and Hauser, F. 1996. Regional gravity and wide-angle seismic studies: North-East Atlantic. *AGU Fall Meeting (San Francisco, 12/15-19/96) Paper T22B-4.*, *Eos, Transactions, American Geophysical Union*, **77**, 46 (Supplement), p. F703.
- Otsuka, K. 1985. Silicified sediments and silica diagenesis in the Goban Spur area of the Northeast Atlantic, Leg 80. *Initial Reports of the Deep Sea Drilling Project*, **80**, Part 2. US Government Printing Office, Washington DC, 1081-1099.
- Pacey, N.R. 1984. Bentonites in the chalk of central eastern England and their relation to the opening of the northeast Atlantic. *Earth and Planetary Science Letters*, **67**, 1, 48-60.
- Pain, S. 1985. Rockall; a controversy in deep water. *New Scientist*, **107**, 50-54.
- Palmer, A.J.M. 1985. Implications of diatom biostratigraphy and biogeography in the Eocene North Atlantic Ocean. *Diss. Abst. Int., Part B, Science and Engineering*, **45**, 9, 286 pp.
- Pankhurst, R.J. 1982. Geochronological tables for British igneous rocks. 575-581 in: Sutherland, D S (Ed). *Igneous rocks of the British Isles*. (Chichester: John Wiley and Sons Ltd).
- Parker, J.R. 1993. Petroleum geology of Northwest Europe: Proceedings of the 4th conference. Geological Society, London, Special Publication, 2 vols., 1600 pp.
- Parnell, J. 1992. Basins on the Atlantic Seaboard: petroleum geology, sedimentology and basin evolution. Geological Society, London, Special Publication, **62**.

- Parnell, J. 1992. Burial histories and hydrocarbon source rocks on the North West Seaboard. In: Parnell, J. (Ed), Basins on the Atlantic Seaboard: petroleum geology, sedimentology and basin evolution. Geological Society, London, Special Publication, **62**, 3-16.
- Parnell, J., Carey, P., Green, P. and Duncan, W. 1997. Hydrocarbon migration history, west of Shetland: integrated fluid inclusion and fission track studies. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 121.
- Parra, M. 1978. Input of mineralogical and geochemical data to the knowledge of the deep sea sedimentation in the Bay of Biscay (North East Atlantic Ocean) of the recent Quaternary. Bull. Inst. Geol. Bass. Aquitaine, **23**, 3-37.
- Parson, L.M. 1987. Continent-ocean transitions of dipping reflector type in the NE Atlantic. In: Brooks, J. and Glennie, K. (eds) Petroleum geology of North West Europe, 1217.
- Parson, L.M., Masson D.G., Miles, P.R. and Pelton, C.D. 1986. Structure and evolution of the Rockall and East Greenland continental margins. I.O.S. Report 233, 71.
- Parson, L.M. and the ODP Leg 104 Scientific Party. 1988. Dipping reflector styles in the NE Atlantic Ocean. In: Morton, A.C. and Parson, L.M. (Eds), Early Tertiary volcanism and the opening of the NE Atlantic. Geological Society, London, Special Publication, **39**, 57-68.
- Pautot, G., Auzende, J-M and LePichon, X. 1970. Continuous deep salt layer along the North Atlantic margin related to early phase of rifting. Nature, **227**, 351-354.
- Pautot, G., Renard, V., Auffret, G., Pastouret, L. And De Charpal, O. 1976. A granite cliff deep in the North Atlantic. Nature, **263**, 669-672.
- Pearson, A.R. 1975. The NW European continental margin, Porcupine seabright to Lofoter Islands, geology and hydrocarbon prospects. unpublished M.Sc. thesis, University of Aberdeen.
- Pearson, I. and Jenkins, D.G. 1986. Unconformities in the Cenozoic of the North-East Atlantic. In: Summerhayes, C.P. and Shackelton, N.J. (Eds), North Atlantic Palaeoceanography. Geological Society, London, Special Publication, **21**, 79-87.
- Peddy, C., Pinet, B., Masson, D., Scrutton, R., Sibuet, J.C., Warner, M.R., Lefort, J.P. and Shroeder. 1989. (BIRPS & ECORS). Crustal structure of the Goban Spur continental margin, Northeast Atlantic, from deep seismic reflection profiling. Journal of the Geological Society, London, **146**, 427-437.
- Pegrum, R.M. and Mounteney, S.N. 1978. Rift basins flanking North Atlantic ocean and their relation to North Sea area. American Association of Petroleum Geologists Bulletin, **62**, 3, 419-441.
- Pegrum, R.M. and Rees, G. 1973. New geophysical and geological data in the NW European shelf. Association of Petroleum Geologists, Sept. 1983 Anaheim Conference.
- Pelletier, B.R. 1969. Cruise Report 69-025, Hudson 69-025. Bedford Institute, 55p.
- Pelletier, B.R. 1971. A granodiorite drill core from the Flemish Cap, Eastern Canadian continental margin. Canadian Journal of Earth Science, **8**, 1499-1503.
- Pennel, H.M. 1972. Development of the North European continental shelf. Petroleum Times, **76**, 9-12.
- Petroleum Affairs Division, DTEC Robertson Research International, Ltd. 1996. A regional evaluation of the Rockall Trough, Irish Sector. Joint PAD/Robertson report.
- Pillen, S., Henriët, J.P. and the Porcupine-Belgica '97 shipboard party RCMG. Abstract, second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.

- Pinet, B., Montadert, L., Mascle, A., Cazes, M. and Bois, C. 1987. New insights on the structure and the formation of sedimentary basins from deep seismic profiling in Western Europe. In: Brooks, J. and Glennie, K. (eds) *Petroleum Geology of North West Europe*. Graham and Trotman, London, 11-31.
- Planke, S., Skogseid, J. and Eldholm, O. 1988. Crustal structure off Norway, 62° to 70° North. Nordic Symposium (Tanumstrand, Sweden, October 1988), papers. *Tectonophysics*, **189**, 1-4, 91-107.
- Poag, C.W. and Ward, L.W. 1987. Cenozoic unconformities and depositional super-sequences of North Atlantic continental margins: testing the Vail model. *Geology*, **15**, 2, 159-162.
- Poore, R.Z. 1979. Temporal and spatial distribution of ice-rafted mineral grains in Pliocene sediments of North Atlantic. *American Association of Petroleum Geologists Bulletin*, **63**, p. 510.
- Poore, R.Z. 1979. Oligocene through Quaternary planktonic foraminiferal biostratigraphy of the North Atlantic. In: Luyendyk, B.P. and Cann, J.R. (Eds), *Initial Reports of the Deep Sea Drilling Project*, **49**. US Government Printing Office, Washington DC, 447-518.
- Poore, R.Z. 1981. Temporal and spatial distribution of ice rafted mineral grains in Pliocene sediments of the North Atlantic: implications for Late Cenozoic climatic history. In: Warne, J.E., Douglas, R.G. and Winterer, E.L. (Eds), *The Deep Sea Drilling Project: a decade of progress*. Special Publication Society of Economic Palaeontologists and Mineralogists, **32**, 505-515.
- Premoli-Silva, I. and Boersma A. 1988. Atlantic Eocene planktonic foraminiferal historical biogeography and palaeohydrographic indices. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **67**, 3-4, 315-356.
- Prescott, C. 1988. Marine geophysical researches over the Hatton Bank-Rockall Plateau margin. PhD thesis, Birmingham.
- Price, I. and Rattey, R.P. 1984. Cretaceous tectonics off mid-Norway: implications for the Rockall and Faeroe Shetland Troughs. *Journal of the Geological Society*, London, **141**, 6, 985-992.
- Readman, P.W., Gohl, K., Liebe, T. and Makris, J. 1989. Marine gravity surveys west of Ireland. *Geological Society Newsletter*, **185**, p. 21.
- Readman, P.W., Jacob, A.W.B., O'Reilly, B.M., Hauser, F., Shannon, P.M., Markis, J. and Vogt, U. 1997. Regional crustal extension in the NE Atlantic: results from wide-angle seismic and gravity studies. UKGA-21, Abstracts of lectures and posters, Southampton, 37.
- Readman, P.W., O'Reilly, B.M., Edwards, J.W.F. and Sankey, M.J. 1995. A gravity map of Ireland and surrounding waters. In: Croker, P.F. and Shannon, P.M. (Eds), *The petroleum geology of Ireland's offshore basins*. Geological Society, London, Special Publication, **93**, 9-16.
- Readman, P.W., O'Reilly, B.M. and Murphy, T. 1997. Gravity gradients and upper-crustal tectonic fabrics, Ireland. *Journal of the Geological Society*, London, **154**, 817-828.
- Rees, A.J., Brown, C.M., Hailwood, E.A. and Riddy, P.J. 1982. Magnetic fabric of bioturbated sediment from the northern Rockall Trough: comparison with modern currents. *Marine Geology*, **46**, 161-173.
- Reeves, T.J. and Robinson, K.W. 1977. A review of petroleum exploration activity on the Irish continental shelf. Paper read at the third meeting of the Geological Societies of the British Isles, Swansea, Sept 26<sup>th</sup>, 1977.
- Reeves, T.J., Robinson, K.W. and Naylor, D. 1978. Ireland's offshore geology. *Irish Offshore Review*, **1**, 25-28.
- Richards, P.C., Ritchie, J.D. and Thomson, A.R. 1987. Evolution of deep-water climbing dunes in the Rockall Trough- Implications for overflow currents across the Wyville -Thomson Ridge in the (?)Late Miocene. *Marine Geology*, **76**, 177-183.



- Ridd, M.F. 1981. Petroleum geology west of Shetlands. In: Illing, L.V. and Hobson, G.D. (Eds), Petroleum geology of the continental shelf of North-West Europe. Heyden London, 414-425.
- Riddihough, R.P. 1968. Magnetic surveys off the north coast of Ireland. Proceedings of the Royal Irish Academy, **66B**, 27-41.
- Riddihough, R.P. 1968. A magnetic map of the continental margin of Western Ireland involving part of the Rockall Trough and the Faeroe Plateau. Dublin Institute for Advanced studies Geophysical Bulletin, **33**.
- Riddihough, R.P. 1969. A geographical pattern of daily magnetic variation over North-West Europe. Annales Geophysicae, **25**, 739-745.
- Riddihough, R.P. and Max, M.D. 1976. A geological framework for the continental margin to the west of Ireland. Geological Journal, **2**, 109-120.
- Riddihough, R.P. and Young, D.G.G. 1971. Gravity and magnetic surveys of Inishowen and adjoining sea areas off the north coast of Ireland. Proceedings of the Geological Society, London, 215-220.
- Ritchie, J.D. and Darbyshire, D.P.F. 1984. Rb-Sr dates on Precambrian rocks from marine exploration wells in and around the West Shetland Basin. Scottish Journal of Geology, **20**, 31-36.
- Ritchie, J.D. and Gatliff, R.W. 1996. Rockall Trough: the last frontier. Geoscientist, **6**, 4, 11-15.
- Ritchie, J.D. and Hitchen, K. 1996. Early Palaeogene offshore igneous activity to the NW of the UK and its relationship to the North Atlantic Igneous Province. In: Correlation of the early Paleogene of Northwest Europe. Geological Society, London, Special Publication, **101**, 63-78.
- Ritchie, J.D., Gatliff, R.W. and Richards, P. 1997. The nature, distribution and age of Early Tertiary magmatism on the NW European margin. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 123.
- Ritchie, J.D., Hitchen, K. and Edwards, J.W.F. 1997. The Sigmundur Complex, a Tertiary igneous centre in the northern Rockall Trough. Scottish Journal of Geology **33**, Part 2, 97-105.
- Roberts, D.G. 1969. New Tertiary volcanic centre on the Rockall Bank, Eastern North Atlantic Ocean. Nature, **223**, 819-820.
- Roberts, D.G. 1970. Recent Geophysical studies on the Rockall Plateau and adjacent areas. Proceedings of the Geological Society, London, **1662**, 87-93.
- Roberts, D.G. 1971. New geophysical evidence on the origins of the Rockall Plateau and Trough. Deep Sea Research, **18**, 353-360.
- Roberts, D.G. 1972. Slumping on the eastern margin of Rockall Bank, North Atlantic Ocean. Marine Geology, **13**, 225-237.
- Roberts, D.G. 1974. RRS "Discovery" Cruise 60, 26 February-22 March 1974. Seismic reflection profiling on the Rockall Plateau and in the South Western Approaches.
- Roberts, D.G. 1974. Structural developments of the British Isles, the continental margin and the Rockall Plateau. In: Burke, C.A. and Drake, C.L. (eds) The Geology of Continental Margins. Springer Verlag, New York, 343-359.
- Roberts, D.G. 1975. Sediment distribution on the Rockall Bank, Rockall Plateau. Marine Geology, **19**, 239-257.

- Roberts, D.G. 1975. Tectonic and stratigraphic evolution of the Rockall Plateau and Trough. In: Woodland, A.W. (Ed), Petroleum and the Continental Shelf of North- West Europe. Applied Science Publishers, Barking, 77- 89. Volume **1**, Geology.
- Roberts, D.G. 1975. Marine geology of the Rockall Plateau and Trough. Philosophical Transactions of the Royal Society, London, **A278**, 447-509.
- Roberts, D.G. 1975. The solid geology of the Rockall Plateau. In: Expedition to Rockall 1971-72. Institute of Geological Sciences report No. 75/1, 3-10.
- Roberts, D.G. 1978. A bathymetric, magnetic and gravity survey of the Rockall Bank, HMS "Hecla" 1969.
- Roberts, D.G. 1978. Structure of the continental margin in the South Western Approaches. Journal of the Geological Society, London, **135**, 4, p. 465.
- Roberts, D.G. 1982. Preliminary results IPOD leg 81 drilling on southwest Rockall Plateau. Eos, Transactions, American Geophysical Union, **63**, 51, p. 1277.
- Roberts, D.G. 1989. Basin inversion in and around the British Isles. In: Cooper, M.A. and Williams, G.D. (Eds), Inversion Tectonics. Geological Society, London, Special Publication, **44**, 131-150.
- Roberts, D.G. and Jones, M.T. 1978. A bathymetric, magnetic and gravity survey of the Rockall Bank by HMS "Hecla" 1969, Admiralty Marine Science Publication, **19**, p 45, Hydrographic Office, Taunton.
- Roberts, D.G. and Kidd, R. B., 1979. Abyssal sediment wave fields on Feni Ridge, Rockall Trough: long-range sonar studies. Marine Geology, **33**, 175-191.
- Roberts, D.G. and Montadert, L. 1979. Margin palaeoenvironments of the Northeast Atlantic. In: Montadert, L., Roberts, D.G. *et al.* (Eds), Initial Reports of the Deep Sea Drilling Project, **48**. US Government Printing Office, Washington DC, 1099-1118.
- Roberts, D.G., Ardur, D.A. and Dearnley, R. 1973. Precambrian rocks drilled from the Rockall Bank. Nature, **244**, 21-23.
- Roberts, D.G., Bott, M.H.P. and Uruski, C. 1983. Structure and origin of the Wyville-Thomson Ridge, Structure and development of the Greenland-Scotland Ridge; new methods and concepts. In: Bott, M.H.P., Saxov, E., Talwani, M. and Thiede, J.K. (Eds), NATO Advanced Research Institute on structure and development of the Greenland - Scotland Ridge; new methods and concepts, Plenum Press, New York, **8**, 133-158.
- Roberts, D.G., Hunter, P.M. and Laughton, A.S. 1977. Bathymetry of the NW Atlantic (sheet 2). Institute of Oceanographic Sciences (now Southampton Oceanographic Centre), U.K.
- Roberts, D.G., Matthews, D.H. and Eden, R.A. 1972. Metamorphic rocks from the southern end of the Rockall Bank. Journal of the Geological Society, London, **128**, 501-506.
- Roberts, D.G., Masson, D.G. and Miles, P.R. 1981. Age and structure of the southern Rockall Trough: new evidence. Earth and Planetary Science Letters, **52**, 115-128.
- Roberts, D.G., Montadert, L. and Searle, R.C. 1979. The western Rockall Plateau: stratigraphy and structural evolution. In: Montadert, L., Roberts, D.G. *et al.* (Eds), Initial Report of the Deep Sea Drilling Program, **48**. US Government Printing Office, Washington DC, 1061-1088.
- Roberts, D.G., Morton, A.C. and Backman, J. 1984. Late Palaeocene-Eocene volcanic events in the northern North Atlantic Ocean. In: Roberts, D.G., Schnitker, D. *et al.* (Eds), Initial Reports of the Deep Sea Drilling Project, **81**. US Government Printing Office, Washington DC, 913-923.
- Roberts, D.G. and Ginzburg, A. 1984. Deep crustal structure of south-west Rockall Plateau. Nature, **308**, 5958, 435-438.

- Roberts, D.G., Backman, J., Morton, A.C., Murray, J.W. and Keene, J.B. 1984. Evolution of volcanic rifted margins: synthesis of leg 81 results on the west margin of Rockall Plateau. In: Roberts, D.G. *et al.* (Eds) Initial Reports of the Deep Sea Drilling Project, **81**, 883-911 (Washington, U.S. Government printing office).
- Roberts, D.G., Bishop, D.G., Loughton, A.S., Ziolkowski, A.M., Scrutton, R.A. and Matthews, D.H. 1970. New sedimentary basin on Rockall Plateau. *Nature*, Vol. **225**, 170-172.
- Roberts, D.G., Fleming, N.C., Harrison, R.K., Binns, P.E. and Snelling, N.J. 1974. Helen's Reef: a microgabbroic intrusion in the Rockall intrusive centre, Rockall Bank. *Marine Geology*, **16**, 21-30.
- Roberts, D.G., Ginzberg, A., Nunn, K. and McQuillin, R. 1988. The structure of the Rockall Trough from seismic refraction and wide-angle reflection measurements. *Nature*, **332**, 632-635.
- Roberts, D.G., Hogg, N.G., Bishop, D.G. and Flewellen, C.G. 1974. Sediment distribution around moated seamounts in the Rockall Trough. *Deep Sea Research*, **21**, 3, 175-184.
- Roberts, D.G., Masson, D.G., Montadert, L. and de Charpal, O. 1981. Continental margin from the Porcupine Seabight to the Armorican marginal basin. In: Illing, L.V. and Hobson, G.D. (Eds), *Petroleum geology of the continental shelf of Northwest Britain*. Institute of Petroleum, London, 455-473.
- Roberts, D. G., Montadert, L., Thompson, R. *et al.* 1980. Geological setting and principal results of drilling on the margins of the Bay of Biscay and Rockall Plateau during Leg 48. *Philosophical Transactions of the Royal Society of London*, **294A**, 65-75.
- Roberts, D.G., Schnitker, D. *et al.* 1984. Initial Reports of the Deep Sea Drilling Program, **81**. US Government Printing Office, Washington DC.
- Robertson Group Plc. 1990. West of Shetland Islands area: a potential fields geophysical evaluation.
- Robertson Group Plc. 1990. West of Shetland Islands well reports: geological synthesis and biostratigraphic reports.
- Robertson Group Plc. 1995. Frontier source rocks of NW Europe and the Atlantic seaboard.
- Robertson Group Plc. 1996.a regional evaluation of the Rockall Trough, Irish Sector. Joint report with Petroleum Affairs Division (PAD), Dublin.
- Robertson Research International Limited 1996. Rockall well reports. An integrated biostratigraphic, geochemical and fission track database.
- Robeson, D. 1987. Stratigraphic palynology and thermal evolution of Amoco Ireland Ltd. Well 19/5-1, Erris Trough, Atlantic Ocean. Trinity College, Dublin.
- Robeson, D. 1988. Palynostratigraphy and thermal maturity of Carboniferous strata offshore western Ireland. Unpublished PhD thesis, Trinity College Dublin.
- Robeson, K.W., Burnett, R.D. and Clayton, G. 1988. The Upper Palaeozoic geology of the Porcupine, Erris and Donegal Basins, offshore Ireland. *Irish Journal of Earth Sciences*, **9**, 153-175.
- Robinson, S.G. 1986. The late Pleistocene record of North Atlantic deep-sea sediments revealed by mineral-magnetic measurements. *Physics of the Earth and Planetary Interiors*, **42**, 22-47.
- Robinson, S.G. and McCave, I.N. 1994. Orbital forcing of bottom-current enhanced pelagic sedimentation on Feni Drift, NE Atlantic, during the mid-Pleistocene. *Palaeoceanography*, **9**, 943-972.

- Robinson, S.G., Maslin, M.A. and McCave, I.N. 1995. Magnetic susceptibility variations in Upper Pleistocene deep-sea sediments of the NE Atlantic: implications for ice rafting and palaeocirculation at the last glacial maximum. *Oceanographic Literature Review*, **42**, p. 11.
- Rowley, D.B. and Lottes, A.K. 1988. Plate-kinematic reconstructions of the North Atlantic and Arctic: Late Jurassic to Present. *Tectonophysics*, **155**, 73-120.
- Ruddiman, W.F. and Glover, L.K. 1972. Vertical mixing of ice-rafted volcanic ash in North Atlantic sediment. *Geological Society of America Bulletin*, **83**, 2817-2836.
- Ruddiman, W.F. and Kidd, R.B. 1987. Initial Reports of the Deep Sea Drilling Project, **94**. US Government Printing Office, Washington DC.
- Ruddiman, W.F., Cameron, D., and Clement, B.M. 1987. Sediment disturbance and correlation of offset holes drill with the hydraulic piston corer: Leg 94. In: Ruddiman, W.F. and Kidd, R.B. (Eds), Initial Reports of the Deep Sea Drilling Project, Vol. **94**, pp.615-634. Washington, U.S. Government Printing Office.
- Ruddiman, W.F., Kidd, R.B., Thomas, E., *et al.* 1986. Initial reports of the Deep Sea Drilling Project, **48**. US Government Printing Office, Washington DC.
- Ruddiman, W.F., Kidd, R.B., Baldauf, J.G. *et al.* 1987. Site 610, Initial reports of the Deep Sea Drilling Project covering Leg 94 of the cruises of the drilling vessel Glomar Challenger, Norfolk, Virginia. to St. Johns, Newfoundland. June-August 1983, 351-470.
- Ruddiman, W.F., Thomas, E., Robinson, F., Kidd, R.B., Baldauf, J.G., Clement, B.M., Dolan, J.F. and Eggers, M.R. 1987. Introduction and site reports (Sites 606, 607, 608, 609, 610, 611, Deep Sea Drilling Project Leg 94, North Atlantic Ocean). Initial reports of the Deep Sea Drilling Project, **94**, Part 1. US Government Printing Office, Washington DC, 5-590.
- Ruffman, A. and van Hinte, J.E. 1992. Orphan Knoll: a window on the opening of the North Atlantic. *Atlantic Geology*, **28**, 3, p. 287.
- Rumph, B., Reaves, C.M., Orange, V.G. and Robinson, D.L. 1993. Structuring and transfer zones in the Faeroe Basin in a regional tectonic context. In: Parker, J.R. (Ed), *Petroleum Geology of Northwest Europe. Proceedings of the 4th Conference*. Geological Society, London, Special Publication, 2 vols., 999-1010.
- Russell, M.J. 1976. A possible Lower Permian age for the onset of ocean floor spreading in the northern North Atlantic. *Scottish Journal of Geology*, **12**, 315-323.
- Russell, M.J. and Smythe, D.K. 1978. Evidence for an early Permian oceanic rift in the northern North Atlantic. In: Neumann, E.R. and Ramberg, I.B. (Eds), *Petrology and geochemistry of continental rifts*. Riedel, Dordrecht, 173-179.
- Ryan, W.B.F., Hsu, K.J., Nesteroff, V.D., Pautot, G., Strandner, H. and Dumitrica, P. 1970. Deep sea drilling project Leg 13. *Geotimes*, **1(10)**, 12-15
- Sabine, P.A. 1965. The geology of Rockall, North Atlantic. *Bulletin of the Geological Survey of Great Britain*, **16**, 156-178.
- Samson, C., Barton, P.J. and Karwatowski, J. 1995. Imaging beneath an opaque basaltic layer using densely sampled wide-angle OBS (ocean-bottom seismometers) data. *Geophysical Prospecting*, **43**, 4, 509-527.
- Savoye, B. 1997. PASISAR results from SEDIFAN 2 cruise. Abstract, Second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.

Sayre, W.O. and Hailwood, E.A., 1985. The magnetic fabric of early Tertiary sediments from the Rockall Plateau, north-east Atlantic Ocean. *Earth and Planetary Science Letters*, 1985.

Schnitker, D. 1984. North-East Atlantic Neogene benthic foraminiferal faunas: tracers of deep-water palaeoceanography. In: Summerhayes, C.P. and Shackleton, N.J. (Eds), *North Atlantic Palaeoceanography*. Geological Society, London, Special Publication **21**.

Schrader, H.J. 1976. Norwegian Sea Cenozoic diatom biostratigraphy and taxonomy. In: Talwani, M. and Udintsev, G. (Eds), *Initial Reports of the Deep Sea Drilling Project*, Vol. **38**, pp.921-1100. Washington, U.S. Government Printing Office.

Schrader, H.J. 1997. Opal phytoplankton in DSDP Leg 49 samples. In: Luyendyk, B.P. and Cann, J.R. (Eds), *Initial Reports of the Deep Sea Drilling Project*, Vol. **49**, pp.589-594. Washington, U.S. Government Printing Office.

Schlumberger Press Release. 1996. Geco-Prakla completes first phase of GSR96 2D survey in Rockall Trough. [www.slb.com/ir/news/pr-gpsurvey.html](http://www.slb.com/ir/news/pr-gpsurvey.html), 1 pp.

Schlumberger Press Release. 1996. Geco-Prakla completes 2D seismic survey in Ireland's Porcupine Basin. [www.oilonline.com/news/egec630.htm](http://www.oilonline.com/news/egec630.htm), 1 pp.

Scoffin, T.P. and Bowes, G.E. 1988. The facies distribution of carbonate sediments on Porcupine Bank, northeast Atlantic. *Sedimentary Geology*, **60**, 1-4, 125-134.

Scoffin, T.P., Alexandersson, E.T., Bowes, G.E., Clokie, J.J., Farrow, G.E. and Milliman, J.D. 1980. Recent, temperate, sub-photic carbonate sedimentation; Rockall Bank, Northeast Atlantic. *Journal of Sedimentary Petrology*, **50**, 331-355.

Scotchman, I.C. and Dore, A.G. 1995. A regional appraisal of source rocks north and west of Britain and Ireland. American Association of Petroleum Geologists International Conference (Nice, France, 9/10-13/95) Paper, American Association of Petroleum Geologists Bulletin, **79**, 8, p. 1247.

Scotchman, I.C. and Thomas, J.R.W. 1995. Maturity and hydrocarbon generation in the Slyne Trough, northwest Ireland. In: P. F. Croker and P. M. Shannon (Eds), *The petroleum geology of Ireland's offshore basins*. Geological Society, London, Special Publication, **93**, 385-413.

Scott, R.W. 1991. Chronostratigraphy of Plio-Pleistocene sequences, offshore Louisiana. *American Association of Petroleum Geologists Bulletin*, **75**, 3, pp. 669.

Scripps Institute of Oceanography. 1982. Leg 81 drills west margin, Rockall Plateau. *Geotimes*, **27**, 9, 21-23.

Scrutton, R.A. 1970. Results of a seismic refraction experiment on Rockall Bank. *Nature*, **227**, 826-827.

Scrutton, R.A. 1971. Gravity and magnetic interpretation of Rosemary Bank, North-East Atlantic. *Geophysical Journal of the Royal Astronomical Society*, **24**, 51-58.

Scrutton, R.A. 1972. The crustal structure of the Rockall Plateau Microcontinent. *Geophysical Journal of the Royal Astronomical Society*, **27**, 259-276.

Scrutton, R.A. 1979. Structure of the crust and upper mantle at Goban Spur, southwest of the British Isles some implications for margin studies. *Tectonophysics*, **59**, 1-4, 201-215.

Scrutton, R.A. 1981. North Atlantic regional tectonics and continental reconstructions. In: *Lecture notes accompanying meeting on 'Geology and Geophysics of the U.K. and Irish continental shelf - Goban Spur to Rockall Bank*, A1-A14.

- Scrutton, R.A. 1985. Modelling of magnetic and gravity anomalies at Goban Spur, Northeast Atlantic. In: Graciansky, P.C. de, Poag, C.W. *et al.* (Eds), Initial Reports of the Deep Sea Drilling Program **80**. US Government Printing Office, Washington DC, 1141-1151.
- Scrutton, R.A. 1986. The geology, crustal structure and evolution of the Rockall Trough and the Faeroe-Shetland Channel. Proceedings of the Royal Society of Edinburgh, **88B**, 7-26.
- Scrutton, R.A. 1986. The subsidence of Rockall Trough. Abstracts, The Tenth UK geophysical assembly, **85**, 279.
- Scrutton, R.A. and Bentley, P.A.D. 1988. Major Cretaceous volcanic province in southern Rockall Trough. Earth and Planetary Science Letters, **91**, 198-204.
- Scrutton, R.A. and Roberts, D.G. 1971. Structure of Rockall Plateau and Trough, NE Atlantic. In: Delaney, F.M. (ed) Institute of Geological Sciences Report No. 70/14, The Geology of the East Atlantic Continental Margin., 77-87.
- Scrutton, R.A. and Stow, D.A.V. 1985. Eocene contourite on seismic records from the Charlie Gibbs fracture zone; implications for deep circulation in the North Atlantic. The Seventh U.K. Geophysical Assembly. Geophysical Journal of the Royal Astronomical Society, **73**, p. 294.
- Scrutton, R.A., Stacey, A.P. and Gray, F. 1971. Evidence for the mode of formation of Porcupine Seabight. Earth and Planetary Science Letters, **11**, 140-146.
- Scrutton, R.A., Stoker, M., Shimmield, G.B. and Tudhope, A.W. 1995. The tectonics, sedimentation and palaeoceanography of the North Atlantic Region. Geological Society, London, Special Publication, **90**, 320 pp.
- Seemann, U. 1984. Tertiary intrusives on the Atlantic continental margin off SW Ireland. Irish Journal of Earth Sciences, **6**, 229-236.
- SGS / GEOLABNOR 1996. Irish Rockall Trough surface geochemistry - seabed coring.
- Shannon, P.M. 1986. Irish offshore geology and petroleum prospectivity. Institute of Chemical Engineering (Irish Branch) *et al.* Oil & Gas Prospects in Ireland Symposium (Cork, Ireland, 5/21-22/86) Preprints, 21-37.
- Shannon, P.M. 1986. Current and future potential of oil and gas exploration in Ireland. In: Glennie, K. and Hurst, A. (eds) AD1995 - NW Europe's Hydrocarbon Industry. Geological Society, London, 51-62.
- Shannon, P.M. 1989. Irish offshore basins: geological development and petroleum plays. European Association of Petroleum Geoscientists, 1st. Annual Conference, Berlin, Abstracts, p. 3.
- Shannon, P.M. 1989. The development of Irish offshore sedimentary basins. Geological Society of London/Royal Irish Academy Conference, Deep Geology and Geophysics of Ireland and its Continental Margin. Galway, Abstracts.
- Shannon, P.M. 1990. Turbidites in the Porcupine Basin. BSRG Conference, basins on the Northwest Seaboard: Post-Devonian basin development, Belfast, Abstracts.
- Shannon, P.M. 1991. Submarine fan plays in the Porcupine Basin, Ireland. European Association of Petroleum Geoscientists, 3rd. Annual Conference, Florence. Abstracts, 105-6.
- Shannon, P.M. 1991. The development of the Irish offshore sedimentary basins. Journal of the Geological Society, London, **148**, 181-189.
- Shannon, P.M. 1991. Irish offshore basins: geological development and petroleum plays. In: Spencer, A.M. (Ed), Generation, Accumulation and Production of Europe's hydrocarbons. Special Publication **1** of the European Association of Petroleum Geoscientists. Oxford University Press, 99-109.

- Shannon, P.M. 1992. Early Tertiary submarine fan deposits in the Porcupine Basin, offshore Ireland. In: Parnell, J. (Ed), Basins on the Atlantic Seaboard: Petroleum Geology, Sedimentology and Basin Evolution. Geological Society, London, Special Publication, **62**, 351-73.
- Shannon, P.M. 1993. Global warming and oil exploration. Technology Ireland, **24**, 26-28.
- Shannon, P.M. 1993. Oil and gas in Ireland - exploration, production and research. First Break, **11**, 429-433.
- Shannon, P.M. 1994. Submarine fan types in the Porcupine Basin, Ireland. In: Spencer, A.M. (Ed), Generation, accumulation and production of Europe's hydrocarbons, III. Special Publication of the European Association of Petroleum Geoscientists, **3**. Springer-Verlag, Berlin, 111-120.
- Shannon, P.M. and Naylor, D. 1989. Petroleum Basin Studies. Graham and Trotman, London. 206 pp.
- Shannon, P.M., Jacob, A.W.B., Makris, J., O' Reilly, B., Hauser, F. and Vogt, U. 1993. Passive margin basin evolution in the Rockall region, North Atlantic. Abstracts, European Association of Petroleum Geoscientists, 5th Annual Conference, Stavanger, 20-21.
- Shannon, P.M., Jacob, A.W.B., Makris, J., O' Reilly, B., Hauser, F. and Vogt, U. 1994. Basin evolution in the Rockall Region, North Atlantic. First Break, **12**, 515-522.
- Shannon, P. M., Jacob, A.W.B., Makris, J., O' Reilly, B.M., Hauser, F. and Vogt, U. 1995. Basin development and Petroleum Prospectivity of the Rockall and Hatton Region. Abstracts, The Petroleum Geology of Ireland's Offshore Basins, Dublin, 52-53.
- Shannon, P. M., Jacob, A.W.B., Makris, J., O' Reilly, B.M., Hauser, F. and Vogt, U. 1995. Basin development and Petroleum Prospectivity of the Rockall and Hatton Region. In: Croker, P.F. and Shannon, P.M. (Eds), The Petroleum Geology of Ireland's Offshore Basins. Geological Society, London, Special Publication, **93**, 435-457.
- Shannon, P. M., Jacob, A.W.B., Makris, J., O' Reilly, B.M., Hauser, F. and Vogt, U. 1997. Rifting processes at a passive margin in the NE Atlantic. Bulletin of the Dublin Institute for Advanced Studies.
- Shannon, P. M., Jacob, A.W.B., Makris, J., O' Reilly, B.M., Hauser, F. and Vogt, U. 1997. Rifting processes at a passive margin in the NE Atlantic. Lithospheric Structure; Evolution and sedimentation in continental rifts, Programmes and Abstracts, Dublin, 53-54.
- Shannon, P. M., Jacob, A.W.B., O' Reilly, B.M., Hauser, F., Makris, J. and Vogt, U. 1995. Wide-angle seismics: a key to understanding the geological development of the North Atlantic. Abstracts, Irish Marine Science Symposium, Galway.
- Shannon, P.M., Jacob, A.W.B., O' Reilly, B.M., Hauser, F., Readman, P.W. and Makris, J. 1997. Structural setting, geological development and basin modelling in the Rockall Trough. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 65.
- Shannon, P.M., Jacob, A.W.B., O' Reilly, B.M., Hauser, F., Readman, P.W. and Makris, J. 1997. Structural setting, geological development and basin modelling in the Rockall Trough. In: Boldy, S.A.R. *et al.* (ed) Petroleum Geology of NW Europe: Proceedings of the 5<sup>th</sup> Conference. The Geological Society, London.
- Shannon, P.M., Moore, J.G., Jacob, A.W.B. and Makris, J. 1993. Cretaceous and Tertiary basin development west of Ireland. In: Parker, J.R. (Ed), Petroleum geology of Northwest Europe: Proceedings of the 4th Conference. Geological Society, London, Special Publication, 2 vols., 1057-66.

- Shannon, P.M., Sinclair, I.K., Williams, B.P.J., Harker, S.D. and Moore, J.G. 1993. Tectonic control and sedimentary basin evolution of three Mesozoic basins, North Atlantic borderlands. Abstracts, European Association of Petroleum Geoscientists, 5th Annual Conference, Stavanger, 225-226.
- Shannon, P.M., Vermeulen, J and Jacob, A.W.B. 1998. Basement control on Mesozoic Basin Development: a comparison between offshore basins west and south of Ireland. Abstract, Geoscience 1998, 14-18 April 1998, Keele University.
- Shannon, P.M., Williams, B.P.J. and Sinclair, I.K. 1995. Tectonic controls on Upper Jurassic to Lower Cretaceous reservoir architecture in the Jeanne d'Arc Basin, with some comparisons from the Porcupine and Moray Firth Basins. In: Croker, P.F. and Shannon, P.M. (Eds), The Petroleum Geology of Ireland's Offshore Basins. Geological Society, London, Special Publication, **93**, 467-490.
- Shyrane, T. PhD in progress. The offshore geology and geophysics of western Ireland. University College Galway.
- Sibuet, J-C. 1988. Northeast Atlantic passive margins: palaeoconstraints during rifting. Bull. Soc. Geol. Fr. 8 Ser., **4**, 4, 515-527.
- Sibuet, J-C., Mathis, B. and Hunter, P. 1984. La ride Pastouret (plaine abyssale de Porcupine): une structure éocène. Compte Rendu Académie Scientifique, Paris, 299, Série **20**, 1391-1396.
- Sibuet, J-C., Mathis, B., Pastouret, L., Auzende, J.M., Fourcher, J.P., Hunter, P.M., Guennoc, P., de Graciansky, P.C., Montadert, L. and Masson, D.G. 1984. Morphology and basement structure of the Goban Spur continental margin (northeastern Atlantic) and the role of the Pyrenean orogeny. In: Initial Reports of the Deep Sea Drilling Program, **80**. US Government Printing Office, Washington DC, 1153-1168.
- Silva, A.J., Baldwin, K.C., Laine, E.P., Dow, W. and Hillister, C.D. 1977. Geotechnical and normal incidence reflection characteristics of Rockall trough sediments. American Geophysical Union; 1977 fall annual meeting, **58**, 1159-1160.
- Simon Petroleum Technology Limited. 1994. West of Shetland Islands: sequence stratigraphy of the Palaeogene.
- Simon Petroleum Technology Limited. 1995. Rockall Trough: sequence stratigraphy and structural framework.
- Simon Petroleum Technology Limited. 1995. Frontier source rocks of Northwest Europe and the Atlantic Seaboard.
- Simon-Robertson. 1992. Geological evolution and petroleum generation: West of Britain basins.
- Sinclair, I.K. 1995. Sequence stratigraphic response to Aptian-Albian rifting in conjugate margin basins: a comparison of the Jeanne d'Arc basin, offshore Newfoundland, and the Porcupine Basin, offshore Ireland. In: Scrutton, R.A., Stoker, M.S., Shimmfield, G.B. and Tudhope, A.W. (Eds), The tectonics, sedimentation and palaeoceanography of the North Atlantic region. Geological Society, London, Special Publication, **90**, 29-49.
- Sinclair, I.K., Shannon, P.M., Williams, B.P.J., Harker, S.D. and Moore, J.G. 1994. Tectonic control on sedimentary evolution of three North Atlantic borderland Mesozoic basins. Basin Research, **6**, 193-217.
- Sinclair, I.K., Shannon, P.M., Williams, B.P.J., Harker, S.D. and Moore, J.G. 1994. tectonic controls on Upper Jurassic to Lower Cretaceous reservoir and source rocks in the Porcupine, Jeanne d'Arc and Outer Moray Firth rift basins. Abstracts, the Petroleum Geology of Ireland's Offshore Basins, Dublin, 80-81.
- Skogseid, J. 1994. Dimensions of the Late Cretaceous-Palaeocene Northeast Atlantic rift derived from Cenozoic subsidence. Tectonophysics, **240**, 225-247.



- Skogseid, J., Pedersen, T., Eldholm, O. and Larsen, B. 1992. Tectonism and magmatism during NE Atlantic continental break-up: the Voring Margin. In: Storey, B.C., Alabaster, T. and Pankhurst, R.J. (Eds), *Magmatism and the causes of continental break-up*. Geological Society, London, Special Publication, **68**, 305-320.
- Smith, I.F., Mould, A.S., Royles, C.P., Hitchen, K., Sankey, M.J., Evans, J. R., Lee, M.K. , Strachan, P., Williamson, J.P. and Pharaoh, T.C. 1995. *Geophysical Image Atlas, Volume 10M: Hebrides-Rockall (Magnetic)*, British Geological Survey (Edinburgh).
- Smith Rea Energy Analysts Ltd & EIS Information Services Ltd 1996. *The Rockall Trough - a new deepwater frontier*. Report March 1996, UK.
- Smythe, D.K. 1985. BIRPS crustal reflection on the Caledonian foreland and the development of the passive margins of NW Europe. 3<sup>rd</sup> Deep Geology Natural Workshop; programme and abstracts. (unpaginated).
- Smythe, D.K. 1989. Rockall Trough - Cretaceous or Late Palaeozoic? *Scottish Journal of Geology*, **25**, 5-43.
- Smythe, D.K., Kenolty, N. and Russel, M.J. 1978. Seismic evidence for Mesozoic sedimentary troughs on the Hebridean Margin. *Nature*, **276**.
- Smythe, D.K., Russell, M.J. and Skuce, A.G. 1995. Intra-continental rifting inferred from the major Late Carboniferous quartz - dolerite dyke swarm of NW Europe. *Scottish Journal of Geology*, **31**, Part 2, 151-162.
- Smythe, D.K., Chalmers, J.A., Skuce, A.G., Dobinson, A. and Mould, A.S. 1983. Early opening history of the North Atlantic; I - Structure and origin of the Faeroe-Shetland escarpment. *Geophysical Journal of the Royal Astronomical Society*, **72**, 373-398.
- SNEA. 1981. 34/5-1 well Ireland. *Geochemical and optical studies of organic matter*.
- SNEA. 1982. 27/13-1 well Ireland. *Geochemical and optical studies of organic matter*.
- Snyder, S.W., and Waters, V.J. 1985. Cenozoic planktonic foraminiferal biostratigraphy of the Goban Spur region, Deep Sea Drilling Project Leg 80. In: Graciansky, P.C. de and Poag, C.W. (Eds), *Initial Reports of the Deep Sea Drilling Project*, **80**. US Government Printing Office, Washington DC, 439-472.
- Snyder, S.W., Mueller, G. and Miller, K.G. 1984. Eocene-Oligocene boundary: biostratigraphic recognition and gradual palaeoceanographic change at Deep Sea Drilling Project, site 549. *Geology*, **12**, 112-115.
- Snyder, S.C., Muller, C., Sigal, J., Townsend, H. and Poag, C.W. 1984. Biostratigraphic, palaeoenvironmental, and palaeomagnetic synthesis of the Goban Spur region. *Initial Report of the Deep Sea Drilling Project*, **80**. US Government Printing Office, Washington DC, 1169-1186.
- Spence, G.D., White, R.S., Westbrook, G.K. and Fowler, S.R. 1989. The Hatton Bank continental margin -I. Shallow structure from two-ship expanding spread seismic profiles. *Geophysical Journal of the Royal Astronomical Society*, **96**, 273-294.
- Spencer, A.M. 1991. *Generation, accumulation and production of Europe's hydrocarbons*. Special Publication **1** of the European Association of Petroleum Geoscientists. Oxford University Press.
- Spencer, A.M., Birkeland, Ø., Knag, G.Ø. and Fredsted, R. 1997. Petroleum systems of the Atlantic margin of North West Europe. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, 81-82.
- Srivastava, S.P. and Verhoef, J. 1992. Evolution of Mesozoic sedimentary basins around the North Central Atlantic: a preliminary plate kinematic solution. In: Parnell, J. (Ed), *Basins on the Atlantic*

Seaboard: Petroleum sedimentology and basin evolution. Geological Society, London, Special Publication, **62**, 397-420.

Srivastava, S.P., Verhoef, J. and Macnab, R. 1988. Results from a detailed aeromagnetic survey across the northeast Newfoundland margin, Part II: early opening of the North Atlantic between the British Isles and Newfoundland. *Marine and Petroleum Geology*, **5**, 324-337.

Srivastava, S.P., Roest, W.R., Gerstall, M.F. and Stock, J.M. 1996. Porcupine plate hypothesis; comment and reply. *Marine Geophysical Researches*, **18**, 589-595.

Stagg, E. 1996. Increasing interest in offshore Ireland. *Petroleum Review*, **50**, 386-387.

Steel, R.J. 1977. Triassic rift basins of north-west Scotland - their configuration, infilling and development. In: Finstad, F.G. and Selley, R.C. (Eds), *Proceedings Mesozoic Northern North Sea Conference 7*.

Steel, R.J. and Wilson, A.C. 1975. Sedimentation and tectonism (Permo-Triassic) on the margin of the North Minch basin, Lewis. *Journal of the Geological Society, London*, **131**, 183-202.

Stein, A.M. 1992. Basin development and petroleum potential in the Minches and Sea of the Hebrides Basins. In: Parnell, J. (Ed), *Basins on the Atlantic Seaboard: Petroleum Geology, Sedimentology and Basin Evolution*. Geological Society, London, Special Publication, **62**, 17-21.

Stein, A.M. and Blundell, D.J. 1988. Geological inheritance and crustal dynamics of the Northwest Scottish continental shelf. *Tectonophysics*, **173**, 1-4, 455-467.

Stein, A.M. and Blundell, D.J. 1990. Geological inheritance and crustal dynamics of the NW Scottish continental shelf. In: Leven, J.H., Finlayson, D.M. *et al.* (eds) *Seismic probing of continents and their margins*, 455-467.

Stein, R., Sarnthein, M. and Suendermann, J. 1986. Late Neogene submarine erosion events along the North-East Atlantic continental margin. In: Summerhayes, C.P. and Shackelton, N.J. (Eds), *North Atlantic Palaeoceanography*. Geological Society, London, Special Publication, **21**, 103-119.

Steinmetz, J.C. 1979. Calcareous nannofossils from the North Atlantic Ocean, Leg 49, Deep Sea Drilling Project. In: Luyendyk, B.P. and Cann, J.R. (Eds), *Initial Reports of the Deep Sea Drilling Project*, **49**. US Government Printing Office, Washington DC, 519-532.

Stoker, M.S. 1988. Pleistocene ice-proximal glacio-marine sediments in boreholes from the Hebrides Shelf and Wyville-Thomson Ridge, NW UK Continental Shelf. *Scottish Journal of Geology*, **24**, 3, 249-262.

Stoker, M.S. 1990. Glacially-influenced sedimentation on the Hebridean slope, northwestern United Kingdom continental margin. In: Dowdeswell, J.A. and Scourse, J.D. (Eds), *Glacimarine Environments; Processes and Sediments*. Geological Society, London, Special Publication, **53**, 349-362.

Stoker, M.S. 1992. A multidisciplinary study of mid-Tertiary to Quaternary sediments recovered in BGS borehole 88/7,7A, Hebrides Slope, northern Rockall Trough region.

Stoker, M.S. 1995. The influence of glacial sedimentation on slope-apron development on the continental margin off Northwest Britain. In: Scrutton, R.A., Stoker, M.S., Shimmfield, G.B. and Tudhope, A.W. (Eds), *The tectonics, sedimentation and palaeoceanography of the North Atlantic Region*. Geological Society, London, Special Publication, **90**, 159-177.

Stoker, M.S. 1996. Mid-to-Late Cenozoic evolution of the Rockall Trough continental margin, Northwest Britain. In programme and abstracts volume of *Tectonic, magmatic and depositional processes at passive continental margins*. Geological Society of London.

Stoker, M.S. 1997. Mid-to-late Cenozoic sedimentation on the continental margin off NW Britain. *Journal of the Geological Society, London*, **154**, 509-515.

Stoker, M.S. 1998. Sediment drift development on the continental margin off NW Britain. In: Stoker, M.S., Evans, D. and Cramp, A. (Eds), *Geological processes on continental margins: sedimentation, mass-wasting and stability*. Geological Society, London, Special Publication No. **129**, 229-254.

Stoker, M.S. 1998. Reconstructing Quaternary palaeoenvironments on the continental margin off NW Europe. Abstract, Geoscience 1998, 14-18 April 1998, Keele University.

Stoker, M.S. and Stow, D.A.V. 1998. Seismic-stratigraphic expression of a sediment-drift complex, Rockall Trough. Abstract, Geoscience 1998, 14-18 April 1998, Keele University.

Stoker, M.S., Evans, D. and Cramp, A. In Press. *Geological processes on continental margins: sedimentation, mass-wasting and stability*. Geological Society, London, Special Publication.

Stoker, M.S., Harland, R. and Morton, A.C. 1987. Late Quaternary stratigraphy of the North Rockall Trough and Faeroe-Shetland Channel, north-west U.K. continental margin. *International Union for Quaternary Research; 7th International Congress; programme and abstracts*, 270.

Stoker, M.S., Harland, R. and Morton, A.C. 1989. Late Quaternary stratigraphy of the North Rockall Trough and Faeroe-Shetland Channel, north-east Atlantic Ocean. *Journal of Quaternary Science*, 1989.

Stoker, M.S., Hitchen, K. and Graham, C.C. 1993. The geology of the Hebrides and West Shetland shelves and adjacent deep-water areas. HSMO for the British Geological Survey, London. United Kingdom offshore regional report, 161 pp.

Stoker, M.S., Abraham, D.A., Evans, D., Long, D., Ardu, D.A. and Dobinson, A. 1990. The Rockall continental margin: a review of existing data and recommendations for a 10-year regional survey programme. *British Geological Survey Technical Report WB/90/5*.

Stoker, M.S., Akhurst, M.C., Howe, J.A. and Stow, D.A.V. 1998. Sediment drifts and contourites on the continental margin off north-west Britain. *Sedimentary Geology*. In press.

Stoker, M.S., Harland, R., Morton, A.C. and Graham, D.K. 1989. Late Quaternary stratigraphy of the northern Rockall Trough and Faeroe-Shetland Channel, northeast Atlantic Ocean. *Journal of Quaternary Science*, **4**, 211-222.

Stoker, M.S., Leslie, A.B., Scott, W.D., Briden, J.C., Hine, N.M., Harland, R., Wilkinson, I.P., Evans, D. and Ardu, D.A. 1994. A record of late Cenozoic stratigraphy, sedimentation and climate change from the Hebrides Slope, NE Atlantic Ocean. *Journal of the Geological Society, London*, **151**, 235-249.

Stoker, M.S., Morton, A.C., Evans, D., Hughes, M.J., Harland, R. and Graham, D.K. 1987. Early Tertiary basalts and tuffaceous sandstones from the Hebrides Shelf and Wyville-Thomson Ridge, NE Atlantic. In: Morton, A.C. and Parson, L.M. (Eds), *Early Tertiary volcanism and the opening of the NE Atlantic*. Geological Society, London, Special Publication, **39**, 271-282.

Stoker, M.S., Stewart, F.S., Paul, M.A. and Long, D. 1993. Problems associated with seismic facies analysis of Quaternary sediments on the northern UK continental margin. *Offshore Site Investigation and Foundation Behaviour*, **28**, 239-262.

Stoker, M.S., Van Weering, T., Stevenson, A. and Gillespie, E. 1997. Aspects of mid- to late Cenozoic, deep-water sedimentation in the Rockall Trough based on ENAM and Rockall seismic datasets. Abstract, second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.

Storey, B.C., Alabaster, T. and Pankhurst, R.J. 1992. Magmatism and the causes of continental breakup. Geological Society, London, Special Publication, **68**.

- Stow, D.A.V. and Holbrook, J.A. 1984. North Atlantic contourites; an overview. In: Stow, D.A.V. and Piper, D.J.W. (Eds), *Fine-grained sediments; deep-water processes and facies*. Geological Society, London, Special Publication, **15**, 245-256.
- Stow, D.A.V. and Holbrook, J.A. 1984. Hatton Drift contourites, northeast Atlantic. In: Roberts, D.G. and Schnitker, D. (Eds), *Initial Reports of the Deep Sea Drilling Project*, **81**. US Government Printing Office, Washington DC, 695-699.
- Strachan, P and Evans, D. 1991. A local deep-water sediment failure on the NW slope of the UK. *Scottish Journal of Geology*, Vol. 27, 107-111.
- Stride, A.H., Curray, J.R., Moore, D.G. and Belderson, R.H. 1969. Marine geology of the Atlantic continental margin of Europe. *Philosophical Transactions of the Royal Society of London*, **264**, A1148, 31-75.
- Sullivan, M., Coombes, T., Imbert, P. and Ahamdach-Demars, C. 1997. Reservoir quality and petrophysical evaluation of Palaeocene sandstones in the west of the Shetland area. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 109.
- Summerhayes, C.P. 1987. Organic-rich Cretaceous sediments from the North Atlantic. In: Brooks, J. and Fleet, A.J. (Eds), *Marine petroleum source rocks*. Geological Society, London, Special Publication, **26**, 301-316.
- Swallow, J. C. 1977. RRS "Discovery" Cruise 86, 7-30 September 1977. Meteorological and oceanographic observations in the Rockall Trough (JASIN 1977). Institute of Oceanographic Sciences, Cruise Report 57, 23 pp & figs.
- Takayama, T. and Sato, T. 1987. Coccolith biostratigraphy of the North Atlantic Ocean, Deep Sea Drilling Project, Leg 94. In: Ruddiman, W.F. and Kidd, R.B. (Eds), *Initial Reports of the Deep Sea Drilling Project*, **94**. US Government Printing Office, Washington DC, 651-702.
- Talbot, L.A., Paul, M.A. and Stoker, M.S. 1994. Geotechnical and acoustic characteristics of Plio-Pleistocene sediments from the Hebrides Slope. *Geo-Marine Letters*, Vol. **14**, 244-251.
- Talwani, M. 1978. Distribution of basement under the eastern North Atlantic Ocean and the Norwegian Sea. In: Bowes, D.R. and Leake, B.E. (eds) *Crustal evolution in north-western Britain and adjacent regions*. Steel House Press, Liverpool, 348-375.
- Talwani, M., Hay, W. and Ryan, W.B.F. 1979. Deep Drilling Results in the Atlantic Ocean: Continental Margin and Palaeoenvironment, Maurice Ewing Series, **3**.
- Tankard, A.J. and Balkwill, H.R. 1989. Extensional tectonics and stratigraphy of the North Atlantic margin. In: Tankard, A.J. and Balkwill, H.R. (Eds), *Extensional tectonics and stratigraphy of the North Atlantic Margins*. American Association of Petroleum Geologists Memoir **46**, 1-6.
- Tate, M.P. 1989. Pre-Mesozoic geology of the western and north-western Irish continental shelf. *Journal of the Geological Society*, London, **146**, 229-240.
- Tate, M.P. 1990. Structural framework and tectono-stratigraphic evolution of the Porcupine Seabight Basin, offshore western Ireland. PhD thesis, University of Wales, Aberystwyth.
- Tate, M.P. 1992. The Clare Lineament: a relic transform fault west of Ireland. In: Parnell, J. (Ed), *Basins on the Atlantic Seaboard: Petroleum geology, sedimentology and basin evolution*. Geological Society, London, Special Publication, **62**, 375-384.
- Tate, M.P. 1993. Structural framework and tectono-stratigraphic evolution of the Porcupine Seabight Basin, offshore western Ireland. *Marine and Petroleum Geology*, **10**, 95-123.

- Tate, M.P. and Dobson, M.R. 1988. Syn- and post-rift igneous activity in the Porcupine Seabight Basin and adjacent continental margin. In: Morton, A.C. and Parson, L.M. (Eds), Early Tertiary volcanism and the opening of the NE Atlantic. Geological Society, London, Special Publication, **39**, 309-334.
- Tate, M.P. and Dobson, M.R. 1989. Pre-Mesozoic geology of the western and northwestern Irish continental shelf. Journal of the Geological Society, London, **146**, 229-240.
- Tate, M.P. and Dobson, M.R. 1989. Late Permian to early Mesozoic rifting and sedimentation offshore NW Ireland. Marine and Petroleum Geology, **6**, 49-59.
- Tate, M.P., Dodd, C.D. and Grant, N. 1997. A newly defined sub-basin in north-eastern Rockall Trough. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 91.
- Tate, M.P., White, N.J. and Conroy, J.J. 1990. Application of the lithospheric stretching model to the Porcupine Seabight Basin, offshore Western Ireland. In: Post-Devonian basin development, North Western Seaboard of the British Isles (Abstracts).
- Tate, M.P., White, N.J. and Conroy, J.J. 1993. Lithospheric extension and magmatism in the Porcupine Basin, west of Ireland. Journal of Geophysical Research, **98**, 13905-13923.
- TEMA. 1997. Programme of the 7th Training-Through-Research international cruise of the R/V Professor Logachev in the northeast Atlantic within the UNESCO/IOC "Floating University" Programme in co-operation with CORSAIRES and ENAM programmes of the EU, 7 July - 17 August 1997. [Www.unesco.org/ioc/tema/medblafu.htm](http://www.unesco.org/ioc/tema/medblafu.htm), 7pp.
- Tessmer, G. and Shannon, P.M. 1995. Geological modelling in the Porcupine Basin - an integrated approach. EAGE 57<sup>th</sup> Conference, Extended Abstracts, Glasgow, **2**, paper P560.
- Tessmer, G., Kosloff, D. and Shannon, P.M. 1994. Modellabhängige Gerschwindigkeitbestimmung aus Reflexionsseismogrammen des Porcupine Beckens, Irland. Abstracts, 54<sup>th</sup> Jahrestagung der Deutschen Geophysikalischen Gesellschaft, Munster. OK21, 106.
- Tessmer, G., Shannon, P.M., Ginzburg, A., McCann, T., O' Reilly, B.M., Reshef, M. and Tessmer, E. 1992. Geological and seismic modelling of the Porcupine basin, Ireland. Abstracts, European Association of Petroleum Geoscientists, 3rd Annual Conference, Paris, 175-6.
- Texaco Ireland Ltd. 1978. Final geological report, Ireland Well 13/3-1.
- Thomas, E., Booth, L., Maslin, M.A. and Shackleton, N.J. 1995. Northeastern Atlantic benthic foraminifera during the last 45,000 years: changes in productivity seen from the bottom up. Palaeoceanography, **10**, 545-562.
- Thomson, J., Colley, S., Anderson, R., Cook, G.T., MacKenzie, A.B. and Harkness, D.D. 1993. Holocene sediment fluxes in the Northeast Atlantic from super (230)Th sub (excess) and radiocarbon measurements. Palaeoceanography, **8**, 5, 631-650.
- Thomson, J., Wallace, H.E., Colley, S., and Toole, J. 1990. Authigenic uranium in Atlantic sediments of the last glacial stage, a diagenetic phenomenon. Earth and Planetary Science Letters, **98**, 2, 222-232.
- Tissot, B.P., Demaison, G., Masson, P., Delteil, J.R. and Combaz, A. 1984. Palaeoenvironment and petroleum potential of Middle Cretaceous black shales in Atlantic Basins. In: Demaison, G. and Murriss, R.J. (Eds), Petroleum geochemistry and basin evaluation. American Association of Petroleum Geologists Memoir, **35**, 217-228.
- Townsend, H.A. 1985. The palaeomagnetism of sediments acquired from the Goban Spur on Deep Sea Drilling Project Leg 80. In: Graciansky, P.C. and Poag, C.W. (Eds), Initial Reports of the Deep Sea Drilling Project, **80**. US Government Printing Office, Washington DC, 389-414.

- Trueblood, S. 1992. Petroleum geology of the Slyne Trough and adjacent basins. In: Parnell, J. (Ed), Basins on the Atlantic Seaboard: Petroleum Geology, Sedimentology and Basin Evolution. Geological Society, London, Special Publication, **62**, 315-326.
- Trueblood, S. and Morton, N. 1991. Comparative sequence stratigraphy and structural styles of the Slyne Trough and Hebrides Basin. Journal of the Geological Society, London, **148**, 197-201.
- Turner, J.D. and Scrutton, R.A. 1993. Subsidence patterns in western margin basins: evidence from the Faeroe-Shetland basin. In: Parker, J.R. (Ed), Petroleum Geology of Northwest Europe. Proceedings of the 4th Conference. Geological Society, London, Special Publication, 2 vols., 975-983.
- Turon, J. L. 1978. Dinoflagellate cysts as indicators of Holocene palaeoenvironments in North Western Atlantic Ocean. Paleohydrological and palaeoclimatological signification. Comptes Rendus Hebdomadaires des Seances Academie Scientifique, Paris, Serie D, **286**(25), 1861-1864.
- Turon, J.L. 1983. Environmental changes in the north eastern Atlantic since 18,000 years b.p.; dinocyst evidence. Palynology, **7**, 252.
- Underhill, J.R. and Johnston, S.C. In Press. Seismic and sequence stratigraphy of Paleogene sediments, West of Shetland: implications for hydrocarbon exploration along the Atlantic margin.
- Unnithan, V., Shannon, P.M., McGrane, K., Jacob, A.W.B., Readman, P.W., Keary, R. and Kenyon, N. 1997. Recent slope failure in the Rockall Trough, offshore Ireland. Abstracts, Annual Irish Geological Research Meeting, Queen's University of Belfast, 33.
- Unnithan, V., Shannon, P.M., McGrane, K., Jacob, A.W.B., Readman, P.W., Keary, R. and Kenyon, N. 1997. Side-scan sonar features in the Rockall Trough, offshore Ireland. Annales Geophysicae, **15**, C384.
- Upton, B.G.J. 1988. History of Tertiary igneous activity in the North Atlantic Borderlands. In: Morton, A.C. and Parson, L.M. (Eds), Early Tertiary Volcanism and the Opening of the NE Atlantic. Geological Society, London, Special Publication, **39**, 429-455.
- Uruski, C.I. and Murphy, E. 1983. Second-order "basement" structures of the North Rockall Trough area (Rosemary Bank to the Wyville-Thomson ridge), outlined by high resolution single-channel seismic reflection, gravity and magnetic profiling. 7<sup>th</sup> U.K. Geophysical Assembly, **73**, 287.
- Van Buchem, F.S.P., de Boer, P.L., McCave, I.N. and Herbin, J.P. 1995. The organic carbon distribution in Mesozoic maritime sediments and the influence of orbital climatic cycles (England and the Western North Atlantic). Studies in Geology, **40**, 303-335.
- Van Hinte, J.E. and Wong, T.E. 1975. Nummulites rockallensis n. sp. from the upper Palaeocene of Rockall Plateau (North Atlantic). Journal of Foraminiferal Research, **5**, 2, 90-101.
- Vanneste, K., Henriot, J.P., Posewang, J. and Theilen, F. 1996. Seismic stratigraphy of the Bill Bailey and Lousy Bank area: implications for subsidence history. In: Scrutton, R.A., Stoker, M.S., Shimmfield, G.B. and Tudhope, A.W. (Eds), The Tectonics, Sedimentation and Palaeoceanography Of The North Atlantic Region. Geological Society, London, Special Publication, **90**, 125-139.
- Van Rooij, D., Henriot, J.P. and the Belgica '96 and Porcupine-Belgica '97 shipboard parties RCMG 1997. Preliminary interpretation of a few high-resolution slope sequences on the margins of the Celtic Sea and Porcupine Basin (Belgica Mounds area). Abstract, second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- Van Weering, T.C.E. and de Rijk, S. 1991. Sedimentation and climate induced sediments on Feni Ridge, Northeast Atlantic Ocean. Marine Geology, **101**, 49-69.

- Van Weering, T.C.E., Ganssen, G. and Labeyrie, L. (Eds), 1996. Ice rafting and palaeoceanography of the Northeast Atlantic Ocean: selected papers presented at the 7th meeting of the European Union of Geosciences held on 4-8 April 1993 in Strasbourg, France (Symposium F06). *Marine Geology*, **131**, 1-2.
- Van Weering, T.C.E., Kuipers, A. and Shipboard Scientific Party. 1996. A survey of the Rockall Margin. Unpublished Shipboard Report Cruise RV Pelagia. August 2-August 23, 1996 Galway-Exel.
- Verhoef, J. and Srivastava, S.P. 1989. Correlation of sedimentary basins across the North Atlantic as obtained from gravity and magnetic data, and its relation to the early evolution of the North Atlantic. In: Tankard, A.J. and Balkwill, H.R. (Eds), *Extensional tectonics and Stratigraphy of the North Atlantic Margins*. American Association of Petroleum Geologists Memoir, **46**, 131-147.
- Verhoef, J. and Williams, C.A. 1993. A method for isolating secular geomagnetic variation from shipboard total field measurements: a test case in the NE Atlantic. *Geophysical Journal International*, **115**, 471-481.
- Verhoef, J., Collette, B.J., Miles, P.R., Searle, R.C., Sibuet, J.C. and Williams, C.A. 1986. Magnetic anomalies in the northeast Atlantic Ocean (35° - 50°). *Marine Geophysical Researches*, **8**, 1-25.
- Vermeulen, N.J. 1997. Hydrography, surface geology and geomorphology of the deep water sedimentary basins to the west of Ireland. *Marine Institute, Marine Resources Series*, **2**, 41 pp.
- Vermeulen, N.J., Landes, M., Shannon, P.M., Readman, P., Jacob, A.W.B. and Prodehl, C. 1997. Geophysical images across the Variscan frontal zone. Abstracts, Annual Irish geological Research Meeting, Queen's University of Belfast, 33.
- Vermeulen, N.J., Shannon, P.M., Landes, M., Jacob, A.W.B., Prodehl, C. and the Varnet Group. 1997. The Irish Variscides - a new insight into an old problem. EAGE 59<sup>th</sup> Conference, extended abstracts, **2**, P532.
- Verstralen, I. and Hurst, A. 1994. Sedimentology, reservoir characteristics and exploration potential of the Rona Sandstone, West of Shetland. *First Break*, **12**, 11-20.
- Verteuil de, L., Head, M.J. and Norris, G. 1996. North Atlantic Neogene dinoflagellate cyst chronostratigraphy: true business horizons. AAPG International Conference (Caracas, Venezuela, 9/8-11/96) Pap. American Association of Petroleum Geologists Bulletin, **80**, 8, p. 1286.
- Vielvoye, R. 1988. Exploration, development review in Irish, German waters. *Oil and Gas Journal*, **86**, 50-51.
- Vogt, U. 1993. The European continental shelf west of Ireland, derived from deep seismic investigations. PhD thesis, IfG, University of Hamburg. [In German].
- Vogt, U. 1993. The European Continental block west of Ireland deduced from deep seismic investigations. *Ber. Zent. Meeres Klimaforsch University of Hamburg, Geophysics*, **2**, 147 pp.
- Vogt, P.R. and Avery, O.E. 1974. Detailed magnetic surveys in the NE Atlantic and Labrador Sea. *Journal of Geophysical research*, **79**, 363-389.
- Vogt, U. and Makris, J. 1993. The Continental Margin of the Rockall Plateau, new wide angle reflection and refraction seismic results. 7th Europe Union Geoscience Meeting (Strasbourg, France, 4/4-8/93) Papers, Terra Abstracts, Supplement 1 to Terra Nova, **5**, p. 139.
- Vogt, P.R., Avery, O.E., Morgan, W.J., Johnson, G.L., Schneider, E.D. and Higgs, R.H. 1969. Morphology, magnetic anomalies and evolution of the northeast Atlantic and Labrador Sea - part 3, Evolution. *Eos, Transactions, American Geophysical Union*, **50**, 4, pp. 184.

- Vogt, U., Makris, J., O'Reilly, B.M., Hauser, F., Readman, P.W., Jacob, A.W.B. and Shannon, P.M. The Hatton Basin and Continental Margin: Crustal structure from wide-angle seismic and gravity data. *Journal of Geophysical Research*,
- Vogt, U., Makris, J., Shannon, P.M. and Jacob, A.W.B. 1992. The continental margin west of Ireland: new wide-angle reflection and refraction seismic results. *Annales Geophysicae*, **8**, C66.
- Waagstein, R. 1988. Structure, composition and age of the Faeroe basalt plateau. In: Morton, A.C. and Parson, L.M. (Eds), *Early Tertiary Volcanism and the Opening of the NE Atlantic*. Geological Society, London, Special Publication, **39**, 225-238.
- Waagstein, R. and Heilmann-Clausen, C. 1995. Petrography and biostratigraphy of Palaeogene volcanoclastic sediments dredged from the Faeroes shelf. 179-197. in *The Tectonics, Sedimentation and Palaeoceanography of the North Atlantic Region*. Scrutton, R.A., Stoker, M.S., Shimmield, G.B. and Tudhope, A.W. (Eds). Geological Society London Special Publication, No. 90.
- Waagstein, R., Morton, A.C., Praegel, N.O., and Taylor, P.N. 1989. Highly alkaline lapilli tuffs from Rosemary Bank: evidence for continental lithosphere beneath the northern part of the Rockall Trough. *Terra Abstracts*, **1**, 31-32.
- Waddams, P. and Cordingley, T. 1997. Regional geology of the NE Rockall Basin. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 61.
- Wallace, H.E., Thomson, J., Wilson, T.R.S., Weaver, P.P.E., Higgs, N.C. and Hydes, D.J. 1988. Active diagenetic formation of metal-rich layers in NE Atlantic sediments. *Geochimica et Cosmochimica Acta*, **52**, 6, 1557-1569.
- Walsh, A., Knag, G., Morris, M., Quinquis, H., Tricker, P., Bird, C. and Bower, S. 1997. Petroleum geology of the Irish Rockall Trough - A frontier challenge. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 67.
- Watts, A.B. and Fairhead, J.D., 1997, Gravity anomalies and magnetism along the western continental margin of the British Isles. *Journal of the Geological Society*, London, Vol. **154**, 523-530.
- Watts, A.B., Schreiber, B.C. and Habib, D. 1975. Dredged rocks from Hatton Bank, Rockall Plateau. *Journal of the Geological Society of London*, **131**, 639-646.
- Watts, W.A. 1971. Geophysical investigations on the continental shelf and slope north of Scotland. *Scottish Journal of geology*, **7**, 189-218.
- Weaver, P.P.E. 1987. Late Miocene to Recent planktonic foraminifers from the North Atlantic: Deep Sea Drilling Project Leg 94. In: Ruddiman, W.F. and Kidd, R.B. (Eds), *Initial Reports of the Deep Sea Drilling Project*, **94**. US Government Printing Office, Washington DC, 703-728.
- Westberg-Smith, M.J. and Riedel, W.R., 1984. Radiolarians from the western margin of the Rockall Plateau: Deep Sea drilling Project Leg 81. In: Roberts, D. G., Schnitker, D., *et al.* Initial reports of the Deep Sea Drilling Project, Vol. 81: Washington(U. S. Government printing office).
- Westberg-Smith, M.J., Tway, L.E. and Riedel, W.R. 1987. Radiolarians from the North Atlantic Ocean, Deep Sea Drilling Project Leg 94. Initial reports of the Deep Sea Drilling Project, **94**, Part 2. US Government Printing Office, Washington DC, 763-777.
- Weston, J.F. 1985. Comparison between Recent benthic foraminiferal faunas of the Porcupine Seabight and Western Approaches continental slope. *Journal of Micropalaeontology*, **4**, 2, 165-183.
- Wheeler, A.J. 1997. Abstract and Itinerary: ENAM II "European North Atlantic Margin": Quantification and modelling of large-scale sedimentary processes and fluxes: 2nd Workshop, Kinsale, Ireland, 30/10/97-2/11/97.



- Wheeler, A.J. 1997. Tales from the deep sea: submarine avalanches, basal current activity, volcanic eruptions and ice-rafted debris in the Rockall Trough. *Chimera*, **12**, 7-14.
- Wheeler, A.J. and Devoy, R.J.N. 1997. Sea-level controls on patterns and processes of shelf to deep marine sedimentation. Abstract for ESF European Research Conference Series, Glacial-Interglacial sea-level changes in four dimensions: evidence of sea-level and of linked environmental changes at the land-ocean interface, Blarney, Ireland, 5/3/97-10/3/97.
- Wheeler, A.J. and Devoy, R.J.N. 1997. Sediment transfer and shelf edge dynamics in the northern Rockall Trough. Abstract for 3rd EU-MAST conference "Shelf-Edge Exchange Processes on the Continental/Oceans Margin of the NE Atlantic", Vigo, Spain, 14/5/97-16/5/97.
- Wheeler, A.J. *et al.* 1996. Preliminary investigations into sediment processes from the Barra Fan to Anton Dohrn Seamount, Northern Rockall Trough. ENAM II. [www.ucc.ie/ucc/research/crc/crcp4.htm](http://www.ucc.ie/ucc/research/crc/crcp4.htm), 2pp.
- Wheeler, A.J. *et al.* 1996. Preliminary results of sediment flux studies across the shelf break, Central Rockall Trough. ENAM II. [www.ucc.ie/ucc/research/crc/enam1.htm](http://www.ucc.ie/ucc/research/crc/enam1.htm), 2pp.
- Wheeler, A.J., Degryse, J.C. and Satur, N. In press. O.R.E. tech deep-tow sidescan sonar profiles of the northern Porcupine Seabight. In: Limonov, A.F., Kenyon, N.H. and Ivanov, M.K. (Eds), Carbonates Mounds and Turbidite Channels from the Porcupine Seabight. UNESCO Reports in Marine Science, 1998.
- Wheeler, A.J., Hayes, C., Devoy, R. and Van Weering, T. 1997. Depositional signals from the base of the continental slope: shelf-edge sediment transfer and remobilisation in the norther Rockall Trough. Abstract, second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- Wheeler, A.J., Zaragosi, S. and Sautkin, A. In press. Interpretation of cores from the middle reaches of the Gollum Channel. In: Limonov, A.F., Kenyon, N.H. and Ivanov, M.K. (Eds), Carbonates Mounds and Turbidite Channels from the Porcupine Seabight. UNESCO Reports in Marine Science, 1998.
- Whitbread, D.R. 1972. The Hydrocarbon Potential of Western Britain and Ireland. North Sea Conference, London, Sept 1972.
- Whitbread, D.R. 1973. The Hydrocarbon Potential of Western Britain and Ireland, North Sea Conferences 1 & 2, 81-84
- Whitbread, D.R. 1975. Geology and petroleum possibilities west of the United Kingdom. In: Woodland, A.W. (ed) Petroleum and the Continental Shelf of NW Europe, **1**, 45-57.
- White, M. 1996. Hydrographic measurements across the Irish Shelf and Porcupine Bank.
- White, N. and Lovell, B. 1997, Measuring the pulse of a plume with the sedimentary record. *Nature*, Vol. **387**, 888-890.
- White, N., Tate, M. and Conroy, J. J. 1991. Stretching, melting and maturation. Basin analysis west of Ireland. *Terra Abstracts*, **3**, 1, pp. 272.
- White, N.J., Tate, M. and Conroy, J. 1992. Lithospheric stretching in the Porcupine Basin, west of Ireland. In: Parnell, J. (Ed), Basins on the Atlantic Seaboard: Petroleum Geology, Sedimentology and Basin Evolution. Geological Society, London, Special Publication, **62**, 327-331.
- White, R.S. 1988. A hot-spot model for early Tertiary volcanism in the North Atlantic. In: Morton, A.C. and Parson, L.M. (Eds), Early Tertiary Volcanism and the Opening of the NE Atlantic. Geological Society, London, Special Publication, **39**, 3-14.

- White, R.S. 1989. Initiation of the Iceland Plume and opening of the North Atlantic. In: Tankard, A.J. and Balkwill, H.R. (Eds), *Extensional Tectonics and Stratigraphy of the North Atlantic Margins*. American Association of Petroleum Geologists Memoir, **46**, 149-154.
- White, R.S. 1989. A hot-spot model for early Tertiary volcanism in the N. Atlantic. In: Morton, A.C. and Parson, L.M. (Eds), *Early Tertiary Volcanism and the Opening of the NE Atlantic*. Geological Society, London, Special Publication, **39**, 3-13.
- White, R.S. 1992. Discussion on crustal structure of the Goban Spur continental margin, Northeast Atlantic, from deep seismic reflection profiling. *Journal of the Geological Society, London*, **147**, 892-894.
- White, R.S. 1992. Crustal structure and magmatism of North Atlantic continental margins. *Journal of the Geological Society, London*, **149**, 841-854.
- White, R.S. 1993. Development of the Rockall Trough and the northwest European continental margin. In: Parker, J.R. (Ed), *Petroleum Geology of Northwest Europe: Proceedings of the 4th conference*. Geological Society, London, Special Publication, 2 vols., p. 985.
- White, R.S. 1997. Rift-plume interaction in the North Atlantic. *Philosophical Transactions of the Royal Society of London*, **A355**, 319-339.
- White, R.S. and Morton, A.C. 1995. Introduction: The Iceland plume and its influence on the evolution of the NE Atlantic. *Journal of the Geological Society, London*, Vol. **152**, 933
- White, R.S. and Parker, J.R. 1993. Development of the Rockall Trough and the NW Europe continental margin. *Petroleum geology of NW Europe; Proceedings of the 4<sup>th</sup> Conference*, P985.
- White, R.S. and Peddy, C. 1990. Discussion on crustal structure of the Goban Spur continental margin, Northeast Atlantic, from deep seismic reflection profiling. *Journal of the Geological Society, London*, **147**, 892-894.
- White, R.S., Fruehn, J., Richardson, K.R., Cullen, E., Kirk, W., Smallwood, J.R. and Latkiewicz, C. 1997. Faeroes large aperture research experiment (FLARE): imaging through basalts. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 221.
- White, R.S., Joppen, M., Spence, G.D., Bowen, A.N. and Westbrook, G.K. 1987. Two ship seismic experiments in the Rockall Trough. *American Geophysical Union*, 1987 fall meeting, **68**, 1372.
- White, R.S., Spence, G.D., Fowler, S.R., McKenzie, D.P., Westbrook, G.K. and Bowen, A.N. 1987. Magmatism at rifted continental margins. *Nature*, **330**, 6147, 439-444.
- White, R.S., Westbrook, G.K., Fowler, S.R., Spence, G.D., Barton, P.J., Joppen, M., Morgan, J., Bowen, A.N., Prestcott, C. and Bott, M.H.P. 1987. Hatton Bank (Northwest U.K.) Continental Margin Structure. *Geophysical Journal of the Royal Astronomical Society*, **89**, 265-272.
- Whitmarsh, R.B. and Miles, P.R. 1987. Seismic structure of a seaward-dipping reflector sequence southwest of Rockall Plateau. *Geophysical Journal*, **90**, 3, 731-739.
- Whitmarsh, R.B., Langford, J.J., Buckley, J.S., Bailey, R.J. and Blundell, D.J. 1974. The crustal structure beneath Porcupine Ridge as determined by explosion seismology. *Earth and Planetary Science Letters*, **22**, 197-204.
- Whittington, R.J., Dobson, M.R. and Mauchline, J. 1986. Seismic investigations of sedimentary structure in the northern Rockall Trough Synopsis. *The Oceanography of the Rockall Channel*. Proceedings of the Royal Society of Edinburgh, **88B**, 53-54.

- Williams, B.P.J., Shannon, P.M., Tessen, N.C. and Sinclair, I.K. 1997. Comparative Jurassic and Cretaceous tectonostratigraphy and reservoir development in the Jeanne d'Arc and Porcupine Basins. In: 5th Conference on Petroleum Geology of NW Europe. Barbican Centre, London, 26-29 October, 1997. Abstract, p. 75.
- Williams, B.P.J., Shannon, P.M., Tessen, N.C. and Sinclair, I.K. 1997. Comparative Jurassic and Cretaceous tectonostratigraphy and reservoir development in the Jeanne d'Arc and Porcupine Basins. In: Boldy, S.A.R. *et al.* (ed) Petroleum geology of NW Europe: Proceedings of the 5th Conference. The Geological Society, London,.
- Williams, C.A. and McKenzie, D. 1971. The evolution of the north east Atlantic. *Nature*, **232**, 168-173.
- Wilson, J.B. 1979. Biogenic carbonate sediments on the Scottish continental shelf and on Rockall Bank. *Marine Geology*, **33**, 3-4, 85-92.
- Wold, C.N. 1994. Cenozoic sediment accumulation on drifts in the northern North Atlantic. *Palaeoceanography*, **9**, 917-941.
- Wold, C.N. 1995. Palaeobathymetric reconstruction on a gridded database: the northern north Atlantic and southern Greenland-Iceland-Norwegian sea. In: Scrutton, R.A., Stoker, M.S., Shimmfield, G.B. and Tudhope, A.W. (Eds), The tectonics, sedimentation and palaeoceanography of the North Atlantic Region. Geological Society, London, Special Publication, **90**, 271-302.
- Wood, M.V. 1988. Magnetic modelling of lavas and Rosemary Bank Seamount, Northern Trough. *Geophysical Journal*, **92**, 3, p. 538.
- Wood, M.V., Hall, J. and van Hoorn, B. 1987. Post-Mesozoic differential subsidence in the north east Rockall Trough related to volcanicity and sedimentation. In: Brooks, J. and Glennie, K.W. (Eds), Petroleum Geology of North West Europe. Graham and Trotman, London, 677-685.
- Wood, M.V., Hall, J. and Doody, J.J. 1988. Distribution of early Tertiary lavas in the NE Rockall Trough. In: Morton, A.C. and Parson, L.M. (Eds), Early Tertiary volcanism and the opening of the NE Atlantic. Geological Society, London, Special Publication, **39**, 283-292.
- Wright, J.E., Eden, R.A. and McQuillin, R. 1972. Recent geological exploration on the continental shelf around the British Isles, 201-211. Proceedings, 24th IGC, Montreal, Section 8.
- Young, D.G.G., and Bailey, R.J. 1974. An reconnaissance magnetic map of the continental margin west of Ireland. Communication of the Dublin Institute for Advanced Studies, Series D. Geophysics Bulletin, **29**.
- Young, D.G.G. and Bailey, R.J. 1974. An Interpretation of some magnetic data off the west coast of Ireland. *Geological Journal*, **9**, 137-146.
- Zehnder, C.M., Mutter, J.C. and Buhl, P. 1990. Deep seismic and geochemical constraints on the nature of rift-induced magmatism during break-up of the North Atlantic. *Tectonophysics*, **173**, 545-565.
- Zelt, C.A. and Barton, P.J. 1998. 3-D wide-angle tomography: evaluation of techniques using a case history from the Faeroes Basin. Abstract, Geoscience 1998, 14-18 April 1998, Keele University.
- Ziegler, P.A. 1981. Evolution of sedimentary basins in North-West Europe. In: Illing, L.V. and Hobson, G.D. (Eds), Petroleum Geology of the Continental Shelf of North-West Europe. Heyden, London, 3-39.
- Ziegler, P.A. 1981. Late Caledonian framework of Western and Central Europe. The Caledonide Orogen - Scandinavia and related areas: Part 1 (Usala University *et al.* Usala Caledonide Symposium & 8th Annual European Geophysics Society Meeting (Usala, Sweden, August 1981)) Proceedings, International Geology Correlation Programme Project, 27, 3-18. John Wiley & Sons, New York.

Ziegler, P.A. 1982. Geological Atlas of western and central Europe. Shell International Petroleum. Maatschappij B.V. Elsevier, Amsterdam.

Ziegler, P.A. 1988. Evolution of the Arctic - North Atlantic and the Western Tethys. American Association of Petroleum Geologists Memoir, **43**.

Ziegler, P.A. 1989. Evolution of the North Atlantic - An overview. In: Tankard, A.J. and Balkwill, H.R. (Eds), Extensional tectonics and Stratigraphy of the North Atlantic Margins. American Association of Petroleum Geologists Memoir, **46**, 111-129.

Zeigler, P.A., 1990. Geological atlas of western Europe and central Europe. 2<sup>nd</sup> Edition. (Amsterdam: Elsevier for Shell International Petroleum, Maatschappij, BV).

Zimmerman, H.B. 1982. Fine grained sediment distribution in the late Pleistocene/Holocene North Atlantic. Environnements sedimentaires de l' Atlantique Nord au Quaternaire. Bordeaux Univ. France. Cent. Recher. Environ. Sediment. Struct. Dom. March 1982, **31-32**, 337-357.

Zimmerman, H.B., 1984. Lithostratigraphy and clay mineralogy of the western margin of the Rockall Plateau and the Hatton Sediment Drift.

Zimmerman, H.B., Shackleton, N.J., Backman, J., Kent, D.V., Baldauf, J.G., Kaltenback, A.J. and Morton, A.C. 1984. History of Plio-Pleistocene climate in the Northeastern Atlantic, DSPH 552A. Initial Reports of the Deep Sea Drilling Project, **81**. US Government Printing Office, Washington DC, 861-875.

## ETC Project No. 97/52

# Bibliography

Compiled By: Michael O'Neill, CSA

Work By: Martin Davies, CSAOG  
Malachy Carey, CSA  
Martin O'Neill, CSAOG  
Jason Hayes, CSA  
Vikram Unnithan, Geology Department,  
UCD  
Andrew Wheeler, Coastal Resources Centre,  
UCC

Additional Data: Southampton Oceanographic Centre, UK.  
and Natural Petroleum Affairs Division, Dept. of Marine  
Resources, Dublin.  
Dublin. Fisheries Research Centre, Marine Institute,

By: \_\_\_\_\_ Approved

Nick O'Neill

Akmetjanov, A., Van Weering, T.C.E., Kenyon, N.H. and Ivanov, M. 1997. Carbonate mounds and reefs on the Rockall Trough and Porcupine Margins. Abstract, second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.

Akhmetjanov, A., van Weering, T.C.E., Kenyon, N.H. and Ivanov, M. 1998. Carbonate mounds and reefs on the Rockall Trough and Porcupine Margins. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.69.

Alcock, G.A. 1982. Offshore bottom pressure records. North Channel of the Irish Sea 1979. Malin Shelf 1979. Rockall Trough 1979. Data Report of the Institute of Oceanographic Sciences, Wormley, **27**, 44 pp.

Alekseyev, F., Alekseyeva, I. and Zakharov, A.N. 1992. Vitellogenesis, nature of spawning, fecundity and gonad maturity stages of the roundnose grenadier, *Corypaenoides rupestris*, in the North Atlantic. Journal of Ichthyology, **33**, 32-45.

Allen, J.A. 1986. Introduction: Deep sea benthic investigations. The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh, **88B**, p.143.

Amelin, N. and Almendinguer, A. 1998. Modelling of acoustic backscatter from corals: away to map coral reefs. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.49.

Amin, M. and Huthnance, J.M. 1996. Shelf-edge distributions of suspended particulates. In: UK Oceanography '96, University of Wales, Bangor, 2-6 September 1996. Programmes and abstracts. Bangor: University of Wales, Challenger Society for Marine Science, p.2.

Andres, H.G. 1987. The Gammaridea of the 76 cruise of FRV Walther Herwig with description of *Parachevreuxiella lobata* genus n. and species n. (Crustacea: Amphipoda). Mitt. Hamb. Zool. Mus. Inst., **84**, 95-103.

Andrews, J.T., Erlenkeuser, H., Evans, L.W., Briggs, W.M. and Jull, A.J.T. 1991. Meltwater and deglaciation, SE Baffin Shelf (NE Margin Laurentide Ice Sheet) between 13.5 and 7ka: From O and C stable isotopic data. Paleoceanography, **6**, 5, 621-637.

Andriyashev, A.P. 1993, 1994. The restoration of the validity of the forgotten species *Amitra liparina* (Goode, 1881), with a description of new species, similar to it, *Paraliparis challengerii*, sp. n. (Scorpaeniformes, Liparidae), from the Porcupine Seabight (Northeast Atlantic). Journal of Ichthyology **34**, 2, 1-7; Vopr. Ikhtiol., 1993; vol. **33**, 5, 597-601.

Andriyashev, A.P. and Chernova, N.V. 1989. A new species of the genus *Careproctus* (Liparididae) from the four kilometer depth of the Porcupine Depression (northeastern Atlantic). Journal of Ichthyology, **29**, 5, 94-98.

Angel, M.V. 1978. RRS "Discovery" Cruise 92, 4 April - 23 May 1978. Midwater and benthic sampling in the Porcupine Seabight and midwater studies along 13W and 17W and around 42N and 17W. Institute of Oceanographic Sciences, Cruise Report, **70**, 42 pp & figs.

Angel, M.V. and Ellis, C.J. 1981. *Conchoecia hystrix* n.sp., a new halocyprid ostracod for the Porcupine Bight region of the northeastern Atlantic. Bulletin of the British Museum of Natural History (Zoology), **40**, 129-135.

Anon. 1978. Joint Air-Sea Interaction programme (JASIN). Offshore Research Focus, **9**, p.2.

Anon. 1979. Current measurement in the North Rockall trough. Offshore Research Focus, **15**, p.7.

Anon. 1996. Report of the Deep-Water Study Working Group. ICES C.M. 1996/Assess, **8**, 145 pp.

- Armishaw, J.E., Holmes, R. and Stow, D.A.V. 1998. Sedimentation on the Hebridean Slope Apron and Borra Fan, NW U.K. Continental Margin. In: Stoker, M.S., Evans, D. and Cramp, A. (eds.) Geological processes on continental margins: sedimentation, mass-wasting and stability. Geological Society London Special Publication, No. 129.
- Armstrong, D.W. 1983. Over exploitation means Scottish west coast stocks are killed too young, but Rockall haddock die of old age. Fisheries News, 3640, 18-19.
- Armstrong, J.D., Bagley, P.M. and Priede, I.G. 1992. Photographic and acoustic tracking observations of the behaviour of the grenadier *Coryphaenoides (Nematonurus) armatus*, the eel *Synaphobranchus bathybius*, and other abyssal demersal fish in the North Atlantic Ocean. Marine Biology, **112**, 4, 535-544.
- Arhan, M., Verdier, A.C. de, Gascard, A.C., Jeannin, P.F., Harvey, J.G. and Molcard, R. 1983. The Tourbillon experiment: A study of a mesoscale eddy in the eastern North Atlantic. Deep Sea Research, **30**, 5A, 475-511.
- Attrill, M.J. 1989. A rhizocephalan (Crustacea, Cirripedia) infestation of the deep sea galatheid *Munida sarsi* (Crustacea, Decapoda), the effects on the host and the influence of depth upon the host parasite relationship. Journal of Zoology, **217**, 4, 663-682.
- Attrill, M.J., Hartnoll, R.G., Rice, A.L., and Thurston, M.H. 1990. A depth related distribution of the red crab, *Geryon trispinosus* (Herbst) (= *G. tridens* (Kroeyeri)): Indications of vertical migration. Programs in Oceanography, **24**, 1-4, 197-206.
- Attrill, M.J., Hartnoll, R.G. and Rice, A.L. 1991. Aspects of the biology of the deep sea crab *Geryon trispinosus* from the Porcupine Seabight. Journal of the Marine Biology Association of the United Kingdom, **71**, 2, 311-328.
- Auffret, G.A., Van Weering, T.C.E. and Sejrup, H.P. 1997. ENAM Cruise organisations. Abstract, second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- Auzende, J.M., Cousin, M., Coutelle, A., Dobson, M., Geoghegan, M., Masson, D., Rolet, J. and Vaillant, P. 1989. Stratigraphy of the scarps bounding the Porcupine Seabight: Preliminary results of the CYAPORC cruise (July - August 1986). Oceanologica Acta, **12**, 117-131.
- Bagley, P.M. and Priede, I.G. 1997. An autonomous free-fall acoustic tracking system for investigation of fish behaviour at abyssal depths. Aquat. Living Resour. Ressour. Vivantes Aquat., **10**, 2, 67-74.
- Bagley, P.M., Smith, A., and Priede, I.G. 1994. Tracking movements of deep demersal fishes in the Porcupine Seabight, northeast Atlantic Ocean. Journal of the Marine Biology Association of the United Kingdom, **74**, 3, 473-480.
- Bailey, R.J. and Haynes, J.R. 1974. New dredge samples from the continental margin bordering Rockall Trough. Marine Geology, **16**, 57-62.
- Baltzer, A., Holmes, R. and Evans, D. 1998. Debris flows on the Sula Sgeir Fan, northwest Scotland. In: Stoker, M.S., Evans, D. and Cramp, A. (eds.) Geological processes on continental margins: sedimentation, mass-wasting and stability. Geological Society London Special Publication, No. 129.
- Bamber, R.N. 1985. A second *Pallenopsis mollissima* (Hoek), with other deep water pycnogonids from the Glasgow Museum (Zoology). Journal of the Linn. Society, **83**, 4, 301-306.
- Banaszek, A.D. and MacDonald, D.C.C. 1985. UK Continental Slope Experiment (CONSLEX) 1982/83. Offshore bottom pressure records: Rockall Trough, Hebrides Shelf, West Shetland Shelf and Faeroe-Shetland Shelf. Institute of Oceanographic Sciences, Report **216**, 71 pp.

- Bard, E., Arnold, M., Mangerud, J., Paterne, M., Labeyrie, L., Duprat, J., Mélières, M.A., Sønstegaard, S. and Duplessy, J-C. 1994. The North Atlantic atmosphere-sea surface 14C gradient during the Yønger Dryas climatic event. *Earth and Planetary Science Letters*, **126**, 275-287.
- Barnett, P.R.O., Watson, J. and Connelly, D. 1986. A multiple corer for taking virtually undisturbed samples from shelf, bathyal and abyssal sediments. *The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh*, **88B**, 304-305.
- Bartsch, J. and Coombs, S. 1997. A numerical model of the dispersion of blue whiting larvae, *Micromesistius poutassou* (Risso), in the eastern North Atlantic. *Fisheries Oceanography*, **6**, 141-154.
- Belanger, P.E. and Berggren, W.A. 1986. Neogene benthic foraminifera of the Hatton-Rockall Basin. *Micropalaeontology*, **32**, 4, 324-356.
- Belderson, R.H. and Kenyon, N.H. 1976. Long-Range Sonar Views of Submarine Canyons. *Marine Geology*, **22**, 69-74.
- Belderson, R.H., Kenyon, N.H. and Wilson, J.B. 1973. Iceberg ploughmarks in the Northeast Atlantic. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **13**, 215-224.
- Belderson, R.H., Kenyon, N.H. and Wilson, J.B. 1985. The exploration of the British continental shelf with side-scan sonar, television and photography. *Institute of Oceanographic Sciences Annual Report 1984*, 70-75.
- Belenkaia, I. 1998. Temperature dependence of isotopic composition for the skeletal ahermatypic Scleractinian corals. *Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs"*, Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.51.
- Belikov, S.V. and Molloy, J. 1989. Results of research on blue whiting in the Porcupine Bank area in spring 1988. *Council Meeting of the International Council for the Exploration of the Sea (The Hague, Netherlands) (5 Oct. 1989)*. Copenhagen, Denmark, ICES, 11 pp.
- Berrow, S.D. 1993. Constant effort cetacean sighting survey of Ireland. *Irish Naturalist's Journal*, **24**, 8, p.344.
- Berrow, S.D. and Heardman, C. 1994. The Basking shark *Cetorhinus maximus* (Gunnerus) in Irish waters - patterns of distribution and abundance. *Biology and Environment: Proceedings of the Royal Irish Academy*, **94B**, 2, 101-107.
- Berrow, S.D. and Rogan, E. 1997. Review of cetaceans stranded on the Irish coast, 1901-95. *Mammal Review*, **27**, 1, 51-76.
- Berrow, S.D., Evans, P.G.H. and Sheldrick, M.C. 1993. An analysis of sperm whale *Physeter macrocephalus* (L.) stranding and sighting data from Britain and Ireland. *Journal of Zoology (London)*, **230**, 333-337.
- Berrow, S.D., Tregenza, N.J.C. and Hammond, P.S. 1993. Marine mammal by-catch on the Celtic Shelf. Report: DG XIV/C/1 Study contract 92/3503, 1-18.
- Bersch, M. 1995. On the circulation of the northeastern North Atlantic. *Deep Sea Research Part I: Oceanographic Research Papers, Part II: Topical studies in Oceanography*, **42**, 9.
- Berthois, L. and Brenot, R. 1966. Existence d'une flexure continentale parcourue par un réseau hydrographique, au Sud-Ouest de l'Irlande. *Compte Rendu Académie Scientifique, Paris, Series D*, **263**, 1297-1299.
- Bertram, C.J., Elderfield, H., Shackleton, N.J. and MacDonald, J.A. 1995. Cadmium/calcium and carbon isotope reconstructions of the glacial northeast Atlantic Ocean. *Palaeoceanography*, **10**, 563-578.



- Bett, B.J. 1994. RRS "Challenger" Cruise 111 (29 March-25 April 1994). Benthic biology of the Porcupine Abyssal Plain. Cruise Report, Institute of Oceanographic Science, Deacon Laboratory, Godalming U.K. IOS, **243**, 46 pp.
- Bett, B.J. and Rice, A.L. 1992. The influence of hexactinellid sponge (*Pheronema carpentieri*) spicules on the patchy distribution of macrobenthos in the Porcupine Seabight (bathyal NE Atlantic). *Ophelia*, **36**, 3, 217-226.
- Bett, B.J. and Rice, A.L. 1993. The feeding behaviour of an abyssal echiuran revealed by in situ time lapse photography. *Deep Sea Research*, 1, Oceanography Research Papers, **40**, 9, 1767-1779.
- Billett, D.S.M. and Hansen, B. 1982. Abyssal aggregations of *Kolga hyalina* (Danielssen and Koren) (Echinodermata: Holothurioidea) in the northeast Atlantic Ocean: a preliminary report. *Deep Sea Research*, **29**, 799-818.
- Bird, G.J. and Holdich, D.M. 1984. New deep sea leptognathiid tanaids (Crustacea, Tanaidacea) from the North East Atlantic. *Zool. Scr.*, **13**, 4, 285-315.
- Bird, G.J. and Holdich, D.M. 1985. A remarkable tubicolous tanaid (Crustacea: Tanaidacea) from the Rockall Trough. *Journal of the Marine Biological Association of the U.K.*, **65**, 3, 563-572.
- Birkhead, T.R. 1984. Distribution of the bridled form of the guillemot *Uria aalge* in the North Atlantic. *Journal of the Zoological Society of London*, **202**, 165-176.
- Bishop, C. 1997. Biomarkers and biogeochemistry in the marine ecosystem. PhD thesis, Southampton University. [www.soc.soton.ac.uk/SUDO/FM2/gifs/phd.html](http://www.soc.soton.ac.uk/SUDO/FM2/gifs/phd.html), 2 pp.
- Bishop, C., Tyler, P.A., Varney, M. and Gage, J.D. 1994. Organic matter transformations in the bathyal seastars *Bathybiaster vexillifer* and *Plutonaster bifrons*. In: David, B. *et al.* (eds.), *Echinoderms through time*, p.278.
- Bishop, J.D.D. and Shalla, S.H. 1995. Discrete seasonal reproduction in an abyssal peracarid crustacean. *Oceanographic Literature Review*, **42**, p.5.
- Blacker, R.W. 1982. Rockall and its fishery. Laboratory Leaflet. New Services Directory of Fisheries Research G.B., **55**, 23 pp.
- Blinov, V.V. 1990. The possibilities for modelling oceanographic conditions of reproduction, spawning and feeding migration paths for the northern stock of blue whiting in the Northeast Atlantic. Council Meeting of the International Council for the Exploration of the Sea, Copenhagen (Denmark), 4-12 Oct. 1990. Copenhagen, Denmark, ICES, 11 pp.
- Bloor, P.D., Reid, J.B., Webb, A., Begg, G. and Tasker, M.L. 1996. The distribution of seabirds and cetaceans between Shetland and the Faeroe Islands. JNCC Report, **226**.
- Blouch, P. and Rolland, J. 1986. The "Bosco" buoy. *Met. Mar.*, **131**, 11-13.
- Bloxham, M., Rowe, A., Smyth, M., McGovern, E. and Nixon, E. In Prep. Heavy metal and organochlorine concentrations in fish and shellfish from Irish waters in 1996. Marine Institute, Fishery Leaflet.
- Boardman, D. 1996. An integrated method for the determination of chemical and biological parameters in abyssal sediments from the North Atlantic Ocean: initial results. In: UK Oceanography '96, University of Wales, Bangor, 2-6 September 1996. Programmes and abstracts. Bangor: University of Wales, Challenger Society for Marine Science, p.286.

- Boetius, A. and Lochte, K. 1994. Regulations of microbial enzymatic degradation of organic matter in deep-sea sediments. *Mar. Ecol. Prog. Ser.*, **104**, 299-307.
- Bond, G., Broecker, W.S., Johnsen, S.J., McManus, J., Labeyrie, L., Jouzel, J. and Bonani, G. 1993. Correlations between climate records from North Atlantic sediments and Greenland ice. *Nature*, **365**, 143-147.
- Bond, G. and Lotti, R. 1995. Iceberg discharges into the North Atlantic on millennial time scales during the last glaciation. *Science*, **267**, 1005-1010.
- Booth, D.A. 1980. Discontinuities in slopes of JASIN T-S diagrams. *JASIN-News*, **16**, 6-7.
- Booth, D.A. 1988. Eddies in the Rockall Trough. *Oceanologica Acta*, **11**, 3, 213-219.
- Booth, D.A. 1988. Horizontal dispersion in the Northeast Atlantic. *Deep Sea Research A: Oceanography Research Paper*, **35**, 12, 1937-1951.
- Booth, D.A. and Meldrum, D.T. 1987. Drifting buoys in the Northeast Atlantic. *J. Cons. Ciém.*, **143**, 3, 261-267.
- Borkin, I.V., Ermolchev, V.A., Shamray, E.A. and Molloy, J.P. 1992. Some ichthyoplankton and hydroacoustic observations in waters to the west and northwest of the British Isles during spring 1992. Council Meeting of the International Council for the Exploration of the Sea, Rostock Warnemuende (FRG), 24 Sept. 2-Oct. 1992. Copenhagen, Denmark ICES, 9 pp.
- Bourne, W.R.P. 1986. Late summer seabird distribution off the west coast of Europe. *Irish Birds*, **3**, 175-198.
- Bowes, G. and Smith, S.M. 1986. Porcupine Bank: The superficial sediments and their fauna. The Oceanography of the Rockall Channel. *Proceedings of the Royal Society of Edinburgh*, **88B**, 303-304.
- Boyle, E.A. and Keigwin, L. 1987. North Atlantic thermo-haline circulation during the past 20,000 years linked to high latitude surface temperature. *Nature*, **330**, p.3540.
- Boytssov, V.D., Titov, O.V., McMahon, T.G. and O' Mahony, M.T. 1991. Physical and chemical characteristics of waters west of the British Isles in spring 1991. Council Meeting of the International Council for the Exploration of the Sea, La Rochelle (France), 26 Sept. 4 Oct. 1991. Copenhagen, Denmark ICES, 10 pp.
- BP Exploration Operating Co. Ltd 1994(?). Current water data from Rockall Trough, Moray Firth, Porcupine Bank, West of Scotland and SW approaches (1978-1984). Available from BP.
- Bray, R.A. and Gibson, D.I. 1991. The *Lepocreadiidae* (Digenea) of fishes from the north east Atlantic: *Profundivermis intercalarius* n. g., n. sp. from the marine fish *Coryphaenoides* (Nematonurus) *armatus* (Hector) (Macrouridae) from the Porcupine Abyssal Plain. *Syst. Parasitology*, **18**, 2, 121-125.
- Brey, T. and Gage, J.D. Interactions of growth and mortality in benthic invertebrate populations: empirical evidence for a mortality/growth continuum. *Arch. fish. mar. Research*, **45**, 45-59.
- British Geological Survey. 1987. Sea bed sediments around the United Kingdom (North Sheet) 1:1,000,000.
- Bronsdon, S.K., Rogers, A.D., Tyler, P.A., Rice, A.L. and Gage, J.D. 1997. Genetic study of the extent and consequences of sexual and asexual reproduction in the deep-sea epizoic anemones *Amphianthus inornatus* and *Kadosactis commensalis* (Cnidaria: Anthozoa), 231-239.
- Brown, A. 1987. Observation of ocean internal waves using echosounders.

- Buck, P. 1986. Sedimentology and micropalaeontology of gravity cores from the NE Atlantic Ocean (South West Ireland). University of Cape Town, Marine Geoscience Unit, Technical Report, **16**, 106-112 & figs.
- Buckland, S.T., Bloch, D., Cattanach, K.L., Gunnlaugsson, T., Hoydal, K., Lens, S. and Sigurjónsson, J. 1993. Distribution and abundance of long-finned pilot whales in the north Atlantic, estimated from NASS-87 and NASS-89 Data. Report of the International Whaling Commission (Special Issue **14**), 33-49.
- Burton, C.A., Tasker, M.L., Benn, S., Webb, A. and Leaper, G.M. 1987. The distribution of seabirds off north-west Scotland, August 1986. Nature Conservancy Council, CSD Report, **758**.
- Campos-Creasey, L.S., Tyler, P.A., Gage, J.D. and John, A.W.G. 1994. Vertical flux coupled to the diet and seasonal life history of the deep-sea echinoid *Echinus affinis*. Deep-Sea Research I, **41**, 369-388.
- Chachkine, P. and Akhmetzhanov, A. 1998. Sub-bottom currents on the Porcupine Margin study by side-scan sonars. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.55.
- Chapman, M.R. and Shackleton, N.J. 1997. Sub-Milankovitch fluctuations in north Atlantic latitudinal heat flux during the last 150,000 years [67/4B37]. Terra Abstracts **9**, 1, p.612.
- Cherriman, J.W. 1982. RRS "Frederick Russell" Cruise 82/2, March 16-29 1982. Current measurements and hydrography in the Rockall Trough and Faeroe-Shetland Channel.
- Chi, J. and Mienert, J. 1996. Linking physical property records of Quaternary sediments to Heinrich events. Marine Geology, **131**, 1-2, 57-73.
- Clark, C.W., Tasker, M.L., Ferguson, M., Hartley, J.P., Fletcher, I., Whitehead, A., Duff, A.A., Appelbee, J.F., Pickton, C., Spink, J., MacDuff-Duncan, C., Knight, S.J., Walls, A.H., Onder, A., Urbanus, J. and Buchanan, I. 1997. Unpublished. Monitoring the occurrence of large whales off north and west Scotland using passive acoustic arrays. Prepared for SPE/UKOOA European Environmental Conference, April 1997.
- Clark, J.D., Kenyon, N.H. and Pickering, K.T. 1992. Quantitative analysis of the geometry of submarine channels: implications for the classification of submarine fans. Geology, **20**, 7, 633-636.
- Clarke, M., Kelly, C.J. and Connolly, P.L. 1998 In Prep. Deep water trawl survey on the eastern slope of the Rockall Trough in 1997. Marine Institute, Fishery Leaflet.
- Colebrook, J.M. 1986. Continuous plankton records: the distribution and standing crop of the plankton of the shelf and ocean to the west of the British Isles. Proceedings of the Royal Society of Edinburgh, **88B**, 221-237.
- Coles, G.P., Ainsworth, N.R., Whatley, R.C. and Jones, R.W. 1996. Foraminifera and ostracoda from Quaternary carbonate mounds associated with gas seepage in the Porcupine Basin, offshore western Ireland. Revista Espanola de Micropaleontologia, **28**, 2, 113-151.
- Collins, D.S. 1982. CTD data collected in the Rockall Trough RRS "Shackleton" Cruise 5C/78 during JASIN 1978, **147**, 149 pp.
- Collins, M., de Grave, S., Lordan, C. and Burnell, G.M. 1994. Diet of the squid *Loligo forbesi* Steenstrup (*Cephalopoda: Loliginidae*) in Irish waters. ICES Journal of Marine Science, **51**, 337-344.
- Collins, M., Burnell, G.M. and Rodhouse, P.G. 1995. Age and growth of the squid *Loligo forbesi* in Irish waters. Journal of the Marine Biology Association of the United Kingdom, **75**, 605-610.

- Collins, M., Burnell, G.M. and Rodhouse, P.G. 1995. The recruitment, maturation and spawning of the squid *Loligo forbesi* in Irish waters. ICES Journal of Marine Science, **52**, 127-137.
- Collins, M.A.C., Lordan, C., Flannery, K., Quigley, D.T. and Howard, F.G. 1997. New records of cephalopods caught in Irish and Scottish waters. Journal of the Marine Biology Association of the United Kingdom, **77**, 561-564.
- Colman, J.G. and Tyler, P.A. 1988. The egg capsules of *Colus jeffreysianus* (Fischer 1868) (Prosobranchia: Neogastropoda) from the Rockall Trough, north-east Atlantic. Sarsia, **73**, 2, 139-145.
- Colman, J.G., Tyler, P.A. and Gage, J.D. 1986. The reproductive biology of *Colus jeffreysianus* (Gastropoda: Prosobranchia) from 2200 m in the N.E. Atlantic. Journal of Molluscan Studies, **52**, 1, 45-54.
- Colman, J.G., Tyler, P.A. and Gage, J.D. 1986. Larval development of deep-sea gastropods (Prosobranchia: Neogastropoda) from the Rockall Trough. Journal of the Marine Biology Association United Kingdom, **66**, 4, 951-965.
- Connolly, P.L. 1992. Cruise report on deep water exploratory fishing by the F.V. "Mary M" off the west coast of Ireland in April 1992. Unpublished cruise report, Fisheries Research Centre, Dublin.
- Connolly, P.L. 1996. The results of the FRC stock monitoring programme for cod, whiting and haddock in ICES VI (Donegal and Rockall). ICES, NoSh Working Group, Aberdeen, June 1994, and Copenhagen, June 1995.
- Connolly, P.L. and Kelly, C.J. 1994. Sampling surveys for deep-water demersal fish in 1993. Fishery Leaflet 163, Department of the Marine, Dublin.
- Connolly, P.L. and Kelly, C.J. 1995. Irish research linked with the development of deep sea fisheries in the Northeast Atlantic. Martin Ryan Irish Marine Science Symposium, September 1995.
- Connolly, P.L. and Kelly, C.J. 1996. Catch and discards from experimental trawl and longline fishing in the deep water of the Rockall Trough. Journal of Fish Biology, **49** (Supplement A), 132-144.
- Connolly, P.L. and Kelly, C.J. 1997. Deep-water trawl and longline surveys in 1995. Fishery Leaflet **173**, Marine Institute, Dublin.
- Connolly, P.L., Kelly, C.J., Clarke, M. and Hareide, N.R. 1998 In Prep. Deep water longline survey on the eastern slopes of the Rockall Trough in 1998. Marine Institute, Fishery Leaflet.
- Connolly, P.L., Kelly, C.J., Gordon, J.D.M. and Bergstad, O.A. 1995. Inventory of otolith collections and ageing work on north east Atlantic Deep Water Fish Species. Fishery Leaflet 165, Marine Institute, Dublin.
- Conway, D.V.P. 1980. The food of larval blue whiting, *Micromesistius poutassou* (Risso), in the Rockall area. Journal of Fish Biology, **16**, 6, 709-723.
- Cortijo, E., Labeyrie, L., Vidal, L., Vautravers, M., Chapman, M.R., Duplessy, J-C., Elliot, M., Arnold, M. and Auffret, G. 1997. Modifications to sea surface hydrology associated with Heinrich event 4 in the North Atlantic Ocean (40-600N). Earth and Planetary Science Letters, **146**, 29-45.
- Costello, J. and Keegan, B.F. 1986. In situ epibenthic studies on the west coast of Ireland. Hydrobiologia.
- Costelloe, M., Costello, J. and Roche, N. 1996. Planktonic dispersion of larval salmon-lice, *Lepeophtheirus salmonis*, associated with cultured salmon, *Salmo salar*, on the west coast of Ireland. Journal of the Marine Biology Association of the United Kingdom, **76**, 141-149.

- Costelloe, M., Costello, J., Roche, N. and O'Connor, B. 1996. Studies on sea lice larvae *Lepeophtheirus salmonis* (Kroyer) on the west coast of Ireland. In: Keegan, B.F. and O'Connor, R. (eds.), Irish Marine Science. Galway University Press Ltd., 303-324.
- Cracknell, A.P. and Huang, W.G. 1988. Surface currents off the west coast of Ireland studied from satellite images. Internal Journal of Remote Sensing, **9**, 439-446.
- Cremer, G. 1992. The breeding and feeding biology of the lesser black-backed gull in southwest Ireland. In: Tasker, M.L. (ed.), European Seabirds, **10**. Proceedings of the seabird group conference held at Glasgow University, 27-29 March 1992.
- Cremer, M., Faugeres, J.C. and Poutiers, J. 1982. Continental rise on stable margins: Morphology and dynamic sedimentary processes, late Quaternary evolution. Bull. Soc. Geol. Fr., **24**, 3, 433-446.
- Cremer, M., Faugeres, J.C., Grousset, F. and Gonthier, E. 1993. Late Quaternary sediment flux on sediment drifts in the Northeast Atlantic. Sedimentary Geology, **82**, 89-101.
- Croker, P.F. 1992. Seabed mounds carbonate knolls in the Porcupine Basin, W. Ireland. Annual Irish Geological Research Meeting, T.C.D., February, 1992.
- Croker, P.F. and O'Loughlin, O. 1998. A catalogue of Irish offshore carbonate mud mounds. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium p.13.
- Cronin, T.M., Raymo, M.E. and Kyle, K.P. 1997. Pliocene (3.2-2.4 Ma) ostracode faunal cycles and deep ocean circulation, North Atlantic Ocean. Geology, **44**, 695-698.
- Cross, F.A., Hardy, L.H., Jones, N.Y. and Barber, R.T. 1973. Relation between total body weight and concentration of manganese, iron, copper, zinc and mercury in white muscle of bluefish (*Pomatomus saltatrix*) and a bathy-demersal fish (*Antimora rostrata*). Jour. Fish. Res. Bd. Can., **30**, 1287-1291.
- Currie, R.I. 1986. Introduction: Early investigations in the Rockall Channel. The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh, **88B**, 1-3.
- Curry, G.B. 1983. Ecology of the recent deep water rhynchonellid brachiopod *Cryptopora* from the Rockall Trough. Palaeogeography, Paleoclimatology, Palaeoecology, **44**, 1-2, 93-102.
- Debrabant, P. and Chamley, H. 1982. Ocean and land influences on the first North Atlantic deposits. Bull. Soc. Geol. Fr., **24**, 3, 473-486.
- Dewitt, L.M., Levine, M.D., Paulson, C.A. and Burt, W.V., 1986. Semidurnal internal tide in JASIN: observations and simulation. Journal of Geophysical Research, 1986.
- Dickson, R.R. 1987. Deep circulation in the southern Rockall Trough: the oceanographic setting of Site 610.
- Dickson, R.R., Gould, W.J., Griffiths, C., Medler, K.J. and Gmitrowicz, E.M. 1986. Seasonality in currents of the Rockall Channel. The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh, **88B**, 103-126.
- Dickson, R.R., Gould, W.J., Mueller, T.J. and Maillard, C. 1985. Estimates of the mean circulation in the deep (> 2,000m) layer of the eastern North Atlantic. In: Crease, J., Gould, W.J. and Saunders, P.M. (Eds.), Essays on Oceanography: A Tribute to John Swallow, **14**, 1-4, 103-127.
- Dickson, R.R., Gurbutt, P.A. and Pillai, V.N. 1980. Satellite evidence of enhanced up-welling along the European continental slope. Journal of Physical Oceanography, **10**, 5, 813-819.

- Dickson, R.R. and Kidd, R.B. 1987. Deep circulation in the Southern Rockall Trough - the oceanographic setting of (DSDP Leg 94) Site 610. Initial reports of the Deep Sea Drilling Project, **94**, Part 2. US Government Printing Office, Washington DC, 1061-1074.
- Dickson, R.R. and McCave, I.N. 1982. Properties of nepheloid layers on the upper slope west of Porcupine Bank. Council Meeting, 1982, of the International Council for the Exploration of the Sea. ICES, 11 Oct. 1982, Copenhagen, Denmark, 20 pp.
- Dickson, R.R. and McCave, I.N. 1986. Nepheloid layers on the continental slope west of Porcupine Bank. Deep Sea Research, **33**, 6, 791-818.
- Dingle, R.V., Megson, J.B. and Scrutton, R.A. 1982. Acoustic stratigraphy of the sedimentary succession west of Porcupine Bank, Northeast Atlantic Ocean: a preliminary account. Marine Geology, **47**, 17-35.
- Domanski, P.A. 1984. Giant larvae: Prolonged planktonic larval phase in the asteroid *Luidia sarsi*. Marine Biology, **80**, 2, 189-195.
- Dooley, H.D. and Henderson, E.W. 1980. Low frequency currents north of Rockall Bank. Council Meeting, 1980, of the International Council for the Exploration of the Sea, Copenhagen (Denmark), 6 Oct. 1980, Copenhagen, Denmark, ICES, 11 pp.
- Dooley, H.D. and Martin, J.H.A. 1980. Coupling between the Faroese Channels and the North Rockall Trough during JASIN. JASIN News, **17**, 7-8.
- Douglas, R.H., Partridge, J.C. and Hope, A.J. 1995. Visual and lenticular pigments in the eyes of demersal deep sea fishes. Journal of Comparative Physiology, **177**, 1, 111-122.
- Dowling, L.M. and McCave, I.N. 1993. Sedimentation on the Feni Drift and late glacial bottom water production in the northern Rockall Trough. Sedimentary Geology, **82**, 79-87.
- Draper, P., Hunter, P.M. and Parr, I.P. 1990. Index of RRS "Discovery" cruises until August 1988, with track charts.
- Edinburgh Oceanographic Laboratory. 1973. Continuous plankton records: a plankton atlas of the North Atlantic and the North Sea. Bulletin of Marine Ecology, **7**, 1-174.
- Edwards, A. 1992. RRS "Challenger" Cruise 97, Oban to Oban, Sept. 25 - Oct. 6 1992. Cruise Report, Dunstaffnage Marine Laboratory, Marine Physics Group, 8pp & 40 figs.
- Edwards, A. 1993. RRS "Challenger" Cruise 105. Cruise Report, Dunstaffnage Marine Laboratory, Marine Physics Group, 12pp & figs.
- Edwards, A. and Gage, J.D. 1993. Rockall Trough time series LOIS shelf edge study pilot programme EC MAST 2 PROFILE Project: Cruise Report RRS "Challenger" Cruise 101. Leg 1: Barry to Oban, 1993, March 6 - 13; Leg 2: Oban to Adrossan, 1993 March 13 - 20. Cruise Report, Dunstaffnage Marine Laboratory, Marine Physics Group, 13 pp & figs.
- Edwards, A., Ellett, D.J., Kruseman, P. and Prangasma, G.J. 1979. Temperature salinity variability in the northern Rockall Trough during JASIN '78. JASIN News, **14**, 3-6.
- Eggers, M.R. and Ehrlich, R. 1985. Distinction of glacial and interglacial cycles on Feni and Gardar drifts, North Atlantic. American Association of Petroleum Geologists Bulletin, **69**, 252.
- Eggers, M.R. and Ehrlich, R. 1987. Provenance changes of fine quartz sands in glacial and interglacial intervals of the Feni and Gardar drifts, North Atlantic; Fourier shape analysis. Initial Reports of the Deep Sea Drilling Project, **94**. US Government Printing Office, Washington DC, 1103-1108.

- Ehrich, S. 1980. Results of bottom trawling at the West European shelf during January to March 1980. Inf. Fischwirtsch., **27**, 90-93.
- Ehrich, S. 1981. First results of the 6th cruise of deep sea trawling in the "Rockall Trench" area west of Ireland and the British Isles. Inf. Fischwirtsch., **28**, 5-6, 171-175.
- Ehrich, S. 1982. Fishery biological investigations on blue ling stocks in the area north of Rockall Deep. Inf. Fischwirtsch., **29**, 2, 53-55.
- Ehrich, S. 1983. Stock assessments of haddock, blue whiting and greater silver smelt on Rockall Bank. Council Meeting, 1983, of the International Council for the Exploration of the Sea (Gothenburg, Sweden) (10 Oct. 1983), Copenhagen, Denmark, ICES, 14 pp.
- Ehrich, S. 1983. On the occurrence of some fish species at the slopes of the Rockall Trough. Archiv fur Fischeriewissenschaft, **33**, 3, 105-150.
- Ehrich, S. and Schoene, R. 1983. Gonad maturation and spawning of blue whiting (*Micromesistius poutassou*) in the Rockall Trough area in 1983. Council Meeting, 1983, of the International Council for the Exploration of the Sea (Gothenburg, Sweden) (10 Oct. 1983), Copenhagen, Denmark, ICES, 15 pp.
- Ellett, D.J. 1980. Some oceanographic features of Hebridean waters. Proceedings of the Royal Society of Edinburgh, **77B**.
- Ellett, D.J. 1982. Long term water mass changes to the West of Britain. World Climate Research Programme, Papers Presented at the Meeting on Time Series of Ocean Measurements, Tokyo, 11-15 May 1981. WMO World Climate Research Programme, Geneva, Switzerland 1982, 245-254.
- Ellett, D.J. 1983. Rockall Channel surface temperature and salinity time series (1948-1983). Annls. Biol., Copenhagen, **37**, 63-66.
- Ellett, D.J. 1986. The hydrography of the Rockall Channel - an overview. Proceedings of the Royal Society of Edinburgh, **88B**, 61-81.
- Ellett, D.J. 1988. Bottom topography to the west of the Wyville-Thomson Ridge.
- Ellett, D.J. 1989. RRS "Discovery" Cruise 180, 20 Jan - 4 Feb 1989. Scottish Marine Biological Association, Dunstaffnage, Oban, 4 pp & figs.
- Ellett, D.J. 1990. Cruise Report: RRS "Challenger" Cruise 67, 21 June-5 July 1990. Rockall Trough. Scottish Marine Biological Association, Dunstaffnage, Oban, 12 pp.
- Ellett, D.J. 1991. Cruise Report: RRS "Challenger" Cruise 75, 14 February-3 March 1991. Rockall Trough. Scottish Marine Biological Association, Dunstaffnage, Oban.
- Ellett, D.J. 1991. Cruise Report: RRS "Challenger" Cruise 81, 1-8 July 1991. Scottish continental shelf and Rockall Channel. Scottish Marine Biological Association, Dunstaffnage, Oban, 5 pp.
- Ellett, D.J. 1992. West of Shetland frontier tranches physical oceanography. West of Shetlands frontier tranches 4-8 Pre-licence environmental assessment. Unpublished report to Mobil North Sea Ltd.
- Ellett, D.J. 1993. Rockall Channel time series LOIS Shelf-Edge Study pilot programme: EC MAST2 PROFILE Project. Cruise Report, RRS "Challenger" Cruise 103, 12-24 May 1993. Scottish Marine Biological Association, Dunstaffnage, Oban, 9 pp & figs.
- Ellett, D.J. 1993. Transit times to the NE Atlantic of Labrador Sea water signals. Council Meeting of the International Council for the Exploration of the Sea (Dublin, Eire), 23 Sept. - 1 Oct. 1993. Copenhagen, Denmark ICES, 12 pp.

- Ellett, D.J. 1994. Salinity variations west of Scotland. NERC news, 1994.
- Ellett, D.J. 1994. Rockall Channel time series LOIS Shelf-Edge Study pilot programme: EC MAST2 PROFILE Project. Cruise Report, RRS "Challenger" Cruise 110, 10-20 March 1994. Scottish Marine Biological Association, Dunstaffnage, Oban, 6 pp & figs.
- Ellett, D.J. 1995. Physical oceanography of the Rockall Trough. Ocean Challenge, **6**, 1, 18-23.
- Ellett, D.J. 1996. Estimates of dispersion near the sea bed at the North Feni Ridge dump site.
- Ellett, D.J. and Morton, J.H.A. 1973. The physical and chemical oceanography of the Rockall Trough. Deep Sea Research, **20**, 585-625.
- Ellett, D.J. and MacDougall, N. 1983. Some monitoring results from West of Britain. Temporelles De Mesure S. Oceaniques, IOC, Paris, France, **1**, 24, 21-25.
- Ellett, D.J. and MacDougall, N. 1985. Hydrographic conditions in the Rockall Channel and to the west of Scotland during 1982.
- Ellett, D.J., Edwards, A. and Bowers, R. 1986. The hydrography of the Rockall Channel - an overview. The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh, **88B**, 61-81.
- Ellett, D.J., Gage, J.D., Gordon, J.D.M., Jones, E.J.W. and Mauchline, J. 1986. A bibliography of the Rockall Trough.
- Ellett, D.J., Harrison, A. and Braden, D. 1994. Rockall Channel time series LOIS Shelf-Edge Study pilot programme: EC MAST2 PROFILE Project. Cruise Report, RRS "Challenger" Cruise 112, 28 April - 13 May 1994. Scottish Marine Biological Association, Dunstaffnage, Oban, 6 pp & figs.
- Ellett, D.J., Kruseman, P., Prangma, G.J., Pollard, R.T., van Aken, H.M., Edwards, A., Dooley, H.D. and Goulds, W.J. 1983. Water masses and mesoscale circulation of North Rockall Trough waters during JASIN 1978. Philosophical Transactions of the Royal Society of London, **308A**, 231-252.
- Ellis, C.J. 1985. The effects of proximity to the continental slope sea bed on pelagic halocyprid ostracods at 49° N, 13° W. Journal of the Marine Biological Association of the United Kingdom, **65**, 4, 923-949.
- Evans, D. 1996. Physiography, pathways and processes on the European Continental Margin. Scale 1:5,000,000. British Geological Survey, Edinburgh.
- Evans, P.G.H. 1981. Report of NE Atlantic scientific cruise, 1980. London, Occasional Publication, Mammal Society.
- Evans, P.G.H. 1988. Killer whales (*Orcinus orca*) in British and Irish waters. Ritfiskideildar, **11**, 1, 42-54.
- Evans, P.G.H. 1992. Status review of cetaceans in British and Irish waters. UK Mammal Society Cetacean Group Report, University of Oxford.
- Evans, P.G.H. and Nice, H. 1996. Review of the effects of the underwater sound generated by seismic surveys on cetaceans. Sea Watch Foundation, Oxford. Executive summary, 2 pp.
- Evans, P.G.H., Lewis, E.J., Parsons, E. and Swann, C. 1993. A survey of whales and dolphins in Hebridian Waters. Oxford, Sea Watch Foundation.
- Fannin, N.G.T. 1989. Offshore investigations 1966-87. British Geological Survey, Marine Geology Series, Technical Report WB/89/2, 31 pp.
- Faugeres, J.C., Gonthier, E., Grousset, F. and Poutiers, J. 1981. The Feni Drift; the importance and meaning of slump deposits on the eastern slope of the Rockall Bank. Marine Geology, **40**, M49-M57.



- Faugeres, J.C., Mezeraïs, M.L. and Stow, D.A.V. 1993. Contourite drift types and their distribution in the North and South Atlantic Ocean basins. *Sedimentary Geology*, **82**, 189-203.
- Filin, A.A. 1994. Winter distribution pattern of commercial blue whiting concentrations in the Faeroe fishery zone. Materials of the Pinro Session devoted to results of studies in 1993. In: Shlejnîk, V.N. (ed.), *Materialy Otchetnoj Sessii Po Itogam Nir Pinro*. Murmansk Russia Izd. Pinro, 102-113.
- Flach, E. and Heip, C. 1997. Vertical distribution of macrozoobenthos within the sediment on the continental slope of the Goban Spur area (NE Atlantic). *Oceanographic Literature Review*, **44**, p.4.
- Flach, E. and Heip, C. 1997. Seasonal variations in faunal distribution and activity across the continental slope of the Goban Spur area (NE Atlantic). *Journal of Sea Research*, **36**, 3-4, 203-215.
- Flood, R.D., Hollister, C.D. and Lonsdale, P. 1979. Disruption of the Feni Sediment Drift by debris flows from Rockall Bank. *Marine Geology*, **32**, 311-334.
- Flood, R.D., Lonsdale, P. and Hollister, C.D. 1976. Microtopography studies in the Rockall Trough, Northeast Atlantic. Abstracts with programs-Geological Society of America, **8**, p.868.
- Frederiksen, R. 1991. The fauna associated with the coral *Lophelia pertusa* around the Faeroes. Summary in: Symposium on Marine Biology and Oceanography of the Faeroe Islands. Reprinted from: *Árbok 1990-91. Nordurlandahúsid í Føroyum*, Torshavn 1992.
- Frederiksen, R., Jensen, A. and Westerberg, H. 1992. The distribution of the scleractinian coral *Lophelia pertusa* around the Faroe Islands and the relation to internal tidal mixing. *Sarsia*, **77**, 157-171.
- Furness, R.W. 1994. An estimate of the quantity of squid consumed by seabirds in the eastern North Atlantic and adjoining seas. Special Issue: Fishery Biology of Northeast Atlantic Squid. *Fisheries Research*, **21**, 1-2.
- Gage, J.D. 1977. Structure of the abyssal macrobiotic community of the Rockall Trough. In: Keegan, B.F., O'Ceidigh, P.O. and Boaden, P.J.S. (Eds.), *Biology of Benthic Organisms*, 247-260.
- Gage, J.D. 1978. Animals in deep sea sediments. *Proceedings of the Royal Society of Edinburgh*, **76B**, 1-3, 77-93.
- Gage, J.D. 1979. Macrobenthic community structure in the Rockall Trough. *Ambio Spec. Rep.* **6**, 43-46.
- Gage, J.D. 1982. Age structure in populations of the deep sea brittle star *Ophiomusium lymani*: A regional comparison. *Deep Sea Research*, **29**, 12A, 1565-1586.
- Gage, J.D. 1984. On the status of the deep sea echinoids, *Echinospira phiale* and *E. paradoxa*. *Journal of the Marine Biological Association of the United Kingdom*, **64**, 1, 157-170.
- Gage, J.D. 1985. The analysis of population dynamics in deep sea benthos. In: Gibbs, P.E. (Ed.), *Proceedings of the Nineteenth European Marine Biology Symposium: Plymouth, Devon, U.K., 16-21 September 1984*, 201-212.
- Gage, J.D. 1985. New Synaptidae (Holothuroidea: Apoda) from the Rockall Trough. *Journal of the Marine Biological Association of the United Kingdom*, **65**, 1, 255-261.
- Gage, J.D. 1986. The benthic fauna of the Rockall Trough: regional distribution and bathymetric zonation. *Proceedings of the Royal Society of Edinburgh*, **88B**, 159-174.
- Gage, J.D. 1986. Growth rates of deep sea benthic animals in the Rockall Trough. *The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh*, **88B**, 314-315.

- Gage, J.D. 1987. Growth of deep-sea irregular sea urchins *Echinosigra phiale* and *Hemiaster expergitus* in the Rockall Trough (NE Atlantic Ocean). *Marine Biology*, **96**, 1, 19-30.
- Gage, J.D. 1990. Cruise report, RRS "Challenger" Cruise 63, 4-30 March 1990. Scottish Marine Biological Association, Dunstaffnage, Oban, 9 pp & figs.
- Gage, J.D. 1991. Biological rates in the deep sea: A perspective from studies on processes in the benthic boundary layer. *Revision of Aquatic Science*, **5**, 1, 49-100.
- Gage, J.D. 1992. Benthic secondary production in the deep sea. In: Rowe, G.T. and Pariente, V. (Eds.), *Deep-Sea Food Chains and the Global Carbon Cycle*, 199-216. Kluwer Academic Publishers, the Netherlands.
- Gage, J.D. 1995. Demographic modelling in the analysis of population dynamics of deep sea macrobenthos. *International Revue ges. Hydrobiology*, **80**, 171-185.
- Gage, J.D. and Billett, D.S.M. 1986. The family Myriotrochidae Theel (Echinodermata: Holothurioidea) in the deep Northeast Atlantic Ocean. *Zoological Journal of the Linn. Soc.*, **88**, 3, 229-279.
- Gage, J.D. and Brey, T. 1994. P/B ratios in deep-sea brittle stars. P.421-426, In: David, B. *et al.* (eds.), *Echinoderms through time*, 940pp.. Rotterdam, A.A. Balkema.
- Gage, J.D. and Tyler, P.A. 1981. Re-appraisal of age composition, growth and survivorship of the deep sea brittle star *Ophiura ljungmani* from size structure in a sample time series from the Rockall Trough. *Marine Biology*, **64**, 2, 163-172.
- Gage, J.D. and Tyler, P.A. 1981. Non-viable seasonal settlement of larvae of the upper bathyal brittle star *Ophiocten gracilis* in the Rockall Trough abyssal. *Marine Biology*, **64**, 2, 153-161.
- Gage, J.D. and Tyler, P.A. 1982. Depth related gradients in size structure and the bathymetric zonation of deep sea brittle stars. *Marine Biology*, **71**, 3, 299-308.
- Gage, J.D. and Tyler, P.A. 1982. Growth and Reproduction of the Deep Sea Brittlestar *Ophiomusium lymani* - Wyville Thomson. *Oceanologica Acta*, **5**, 1, 73-83.
- Gage, J.D. and Tyler, P.A. 1985. *Marine Biology*, **90**, 1, 41-53.
- Gage, J.D. Lightfoot, R.H. Pearson, M. and Tyler, P.A. 1980. An introduction to a sample time series of abyssal macrobenthos: methods and principle sources of variability. *Oceanologica Acta*, **3**, 2, 169-176.
- Gage, J.D., Pearson, M., Billett, D.S.M., Jensen, M. and Tyler, P.A. 1985. Echinoderms of the Rockall Trough and adjacent areas. 2. Echinoidea and Holothurioidea. *Bulletin of the British Museum of Natural History (Zoology)*, **48**, 173-213.
- Gage, J.D., Pearson, M., Billett, D.S.M., Clarke, A.M., Jensen, M., Paterson, G.L.J. and Tyler, P.A. 1985. Echinoderm zonation in the Rockall Trough (NE Atlantic). P.31-36, In: Keegan, B.F. and O'Connor, B.D.S. (Eds.), *Echinodermata*. Rotterdam, A.A. Balkema.
- Gage, J.D., Pearson, M., Clark, A.M., Paterson, G.L.J. and Tyler, P.A. 1983. Echinoderms of the Rockall Trough and adjacent areas. 1. Crinoidea, Asteroidea and Ophiuroidea. *Bulletin of the British Museum of Natural History (Zoology)*, **45**, 5, 263-308.
- Gage, J.D., Tyler, P.A., Allen, J.A., Davies, G., Harvey, R. and de Mooy, A. 1988. Life-history studies on the deep-sea bivalve community in the Rockall Trough (NE Atlantic). P.96, In: *Fifth deep sea biology symposium, Brest, 26 June - 1 July 1988. Programme and abstracts, IFREMER*, 172pp.

Gainanov, V. 1998. Seismic investigation of carbonate mounds in the North Atlantic to the west of Ireland. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.73.

Gawthorpe, R.L and Hurst, J.M. 1993. Transfer zones in extensional basins: their structural style and influence on drainage development and stratigraphy. Journal of the Geological Society, London. Vol. **150**, 1137-1153.

Geddes, N.R. 1993. Measured data sets (R.T. etc.) held by DRA Sonar Performance Division Report DRA/US/USSF/TM93201/1.0

Geistdoerfer, p.1979. New data on the reproduction of macrourids (Teleostei, Gadiformes). Sarsia, **64**, 1-2, 109-112.

GEOMAR 1996. Lithothek: ENAM II Project - Brief description.  
[www.geomar.de/zd/lithothek/ENAM\\_II.html](http://www.geomar.de/zd/lithothek/ENAM_II.html), 2 pp.

Gibson, D.I. 1995. *Allopodocotyle margolisi* n.sp. (Digenea: Opecoelidae) from the deep-sea fish *Coryphaenoides* (Chalinura) *mediterraneus* in the northeastern Atlantic. Canadian Journal of Fisheries, Aquatic Science Journal of Canada, Science Halieut Aquatic, **52**, 90-94.

Giedz, M. 1984. A comparison of otolith width of the blue whiting from Porcupine Bank and Rockall Bank. Council Meeting of the International Council for the Exploration of the Sea, (Copenhagen (Denmark)), 8 Oct. 1984, Copenhagen, Denmark, ICES, 17 pp.

Go, Y-B. 1988. Vertical distribution and biology of micronektonic fishes from meso- and upper bathypelagic layers in the Rockall Trough and Porcupine Seabight, eastern North Atlantic Ocean. Journal of the Oceanological Society of Korea, **23**, 1, 41-52.

Go, Y-B and Badcock, J. 1986. Food and feeding activity of micronektonic fish, gonostomatidae, from meso- and upper bathypelagic layers in the northeastern Atlantic. Journal of the Oceanological Society of Korea, **21**, 2, 85-91.

Gonthier, E., Klingebiel, A. and Poutiers, J. 1977. Distribution of detritic sandy elements in deep north eastern Atlantic sediments. Bull. Soc. Geol. Fr., **19**, 2, 197-201.

Gooday, A.J. 1983. The vertical distribution of foraminifera within the sediment: preliminary results from the bathyal Porcupine Seabight. Deep Sea Newsletter, **8**, 5-8.

Gooday, A.J. 1984. Records of deep sea rhizopod tests inhabited by metazoans in the Northeast Atlantic. Sarsia, **69**, 1, 45-53.

Gooday, A.J. 1986. Meiofaunal foraminiferans from the bathyal Porcupine Seabight (Northeast Atlantic): Size structure, standing stock, taxonomic composition, species diversity and vertical distribution in the sediment. Deep Sea Research, **33**, 10A, 1345-1373.

Gooday, A.J. 1986. Soft shelled foraminifera in meiofaunal samples from the bathyal Northeast Atlantic. Sarsia, **71**, 3-4, 275-287.

Gooday, A.J. 1991. Cruise report, RRS "Challenger" Cruise 75, 14 February - 3 March 1991. Rockall Trough. Scottish Marine Biological Association, Dunstaffnage, Oban, 14 pp.

Gooday, A.J. 1993. Deep sea benthic foraminiferal species which exploit phytodetritus: Characteristic features and controls on distribution. Marine Micropaleontology, **22**, 3, 187-205.

Gooday, A.J. 1996. Epifaunal and shallow infaunal foraminiferal communities at three abyssal NE Atlantic sites subject to differing phytodetritus input regimes. Deep Sea Research Part I: Oceanographic Research Papers, Part II: Topical studies in oceanography, **43**, p.9.

- Gooday, A.J. 1997. Xenophyophores (Protista), including two new species, from two abyssal sites in the Northeast Atlantic Ocean. *Oceanographic Literature Review*, **44**, p.3.
- Gooday, A.J. and Cartwright, N.G. 1986. Meiofaunal foraminifera from the bathyal and abyssal NE Atlantic. In: Abstracts, 6<sup>th</sup> International Meiofauna Conference, University of South Florida, Tampa, July 13-19 1986. International Association of Meibenthologists. (Unpaginated).
- Gooday, A.J. and Lamshead, P.J.D. 1989. Influence of seasonally deposited phytodetritus on benthic foraminiferal populations in the bathyal Northeast Atlantic: The species response. *Marine Ecology Program Series*, **58**, 1-2, 53-67.
- Gooday, A.J., Carstens, M. and Thiel, H. 1995. Micro- and nano-foraminifera from abyssal Northeast Atlantic sediments: a preliminary report. *International Review of Gesamt. Hydrobiology*, **80**, 2, 361-383.
- Gooday, A.J., Pfannkuche, O. and Lamshead, P.J.D. 1996. An apparent lack of response by metazoan meiofauna to phytodetritus deposition in the bathyal northeastern Atlantic. *Journal of the Marine Biological Association of the United Kingdom*, **76**, 2, 297-310.
- Gooday, A.J., Shires, R. and Jones, A.R. 1997. Large, deep-sea agglutinated foraminifera: two differing kinds of organization and their possible ecological significance. *Journal of Foraminiferal Research*, **27**, 4, 278-291.
- Gordon, J.D.M. 1985. RRS "Challenger" Cruise 3/85, 12-29 April 1985. Scottish Marine Biological Association, Dunstaffnage, Oban, 13 pp & appendices.
- Gordon, J.D.M. 1986. The fish populations of the Rockall Trough. *Proceedings of the Royal Society of Edinburgh*, **88B**, 191-204.
- Gordon, J.D.M. 1987. RRS "Challenger" cruise 20/87, 17 October - 3 November 1987. Scottish Marine Biological Association, Dunstaffnage, Oban, 8 pp & tables.
- Gordon, J.D.M. and Berstad, O.A. 1992. Species composition of demersal fish in the Rockall Trough, northeastern Atlantic, as determined by different trawls. *Journal of the Marine Biological Association of the United Kingdom*, **72**, 213-230.
- Gordon, J.D.M. and Duncan, J.A.R. 1985. The biology of fish of the family *Moridae* in the deep water of the Rockall Trough. *Journal of the Marine Biological Association of the United Kingdom*, **65**, 2, 475-485.
- Gordon, J.D.M. and Duncan, J.A.R. 1985. The ecology of the deep-sea benthic and benthopelagic fish on the slopes of the Rockall Trough, northeastern Atlantic. *Progress in Oceanography*, **15**, 1, 37-69.
- Gordon, J.D.M. and Duncan, J.A.R. 1987. Deep-sea bottom living fish at two repeat stations at 2200 and 2900m in the Rockall Trough, northeastern Atlantic Ocean. *Marine Biology*, **96**, 309-325.
- Gordon, J.D.M. and Duncan, J.A.R. 1987. Aspects of the biology of *Hoplostethus atlanticus* and *H. mediterraneus* (Pisces: Berycomorphi) from the slopes of the Rockall Trough and the Porcupine Seabight (Northeastern Atlantic). *Journal of the Marine Biological Association of the United Kingdom*, **67**, 1, 119-133.
- Gordon, J.D.M. and Duncan, J.A.R. 1989. A note on the distribution and diet of deep-water rays (Rajidae) in an area of the Rockall Trough. *Journal of the Marine Biological Association of the United Kingdom*, **69**, 3, 655-658.
- Gordon, J.D.M. and Hunter, J.E. 1994. Study of deep water fish stocks to the west of Scotland. Unpublished 2 volume report for Highlands and Islands Enterprise and others, May 1994.

Gordon, J.D.M. and Huthnance, J.M. 1987. Storm driven continental shelf waves over the Scottish continental shelf. *Continental Shelf Research*, **7**, 1015-1048.

Gordon, J.D.M. and Mauchline, J. 1990. Depth-related trends in diet of a deep-sea bottom-dwelling fish assemblage of the Rockall Trough. P.439-452, In: Barnes, M. and Gibson, R.N. (eds.), *Trophic relationships in the marine environment: proceedings of the 24<sup>th</sup> European Marine Biology Symposium*. Aberdeen University Press 642pp.

Gordon, J.D.M. and Mauchline, J. 1996. The distribution and diet of the dominant, slope dwelling eel, *Synaphobranchus kaupii*, of the Rockall Trough. *Journal of the Marine Biological Association of the United Kingdom*, **76**, 93-503

Gordon, J.D.M., Merrett, N.R. and Haedrich, R.L. 1995. Environmental and biological aspects of slope dwelling fishes of the North Atlantic. In: Hopper, A.G. (ed.), *Deep water fisheries of the north Atlantic slope*, 1-27.

Gordon, J.D.M., Merrett, N.R., Bergstad, O.A. and Swan, S.C. 1996. A comparison of the deep-water demersal fish assemblages of the Rockall Trough and Porcupine Seabight, eastern North Atlantic: continental slope to rise. *Journal of Fish Biology*, **49** (Supplement A), 217-238.

Gormley, T.R., Connolly, P.L. and Ward, P. 1994. Evaluation of deep-water fish species. *Teagasc, Farm and Wood*, Vol. **4**, 8-11.

Gould, W.J. 1978. Preliminary report on currents in the North Rockall Trough.

Gould, W.J. 1980. Shackleton phase O hydro stations. *JASIN News*, **18**, 4-5.

Gould, W.J. 1982. Long-term current measurements in the North Rockall Trough, Summer 1978 to Autumn 1980.

Gould, W.J. 1983. Current measurements in the north Rockall Trough.

Gould, W.J. and Cutler, A.N. 1980. Long period variability of currents in the Rockall Trough. Council Meeting, 1980, of the International Council for the Exploration of the Sea, Copenhagen (Denmark), 6 October 1980, Copenhagen, Denmark, ICES, 9 pp.

Gould, W.J. and Cutler, A.N. 1981. Long period variability of currents in the Rockall Trough. *JASIN News*, **22**, 4-6.

Grant, A. 1985. Analysis of continuous reproduction in deep sea seastars. In: Gibbs, P.E. (ed.), *Proceedings of the Nineteenth European Marine Biology Symposium: Plymouth, Devon, U.K., 16-21 September 1984*, 213-222.

Grassle, F., Angel, M., Brattegard, T., Desbruyeres, D., Lobel, p. and Schrieffer, G. 1991. Response of benthic ecosystems to perturbations. P. 48-56, In: Spencer, D.W. (ed.), *An abyssal ocean option for waste management: report of a Workshop, 7-10 January 1991*, Woods Hole Oceanographic Institution, 111pp.

Gray, J.S. 1997. Gradients in marine biodiversity. In: Ormond, R.F.G., Gage, J.D. and Angel, M.V. (eds) *Marine Biodiversity*. Cambridge University Press, pp. 18-34.

Greenpeace 1997. The physical and benthic environment of the Atlantic Margin and the west of Scotland. [www.greenpeace.org.uk/atlantic/library/oil/berryreport/section2.html](http://www.greenpeace.org.uk/atlantic/library/oil/berryreport/section2.html), 7pp.

Grigorev, G.V. 1972. Reproduction of *Macrurus rupestris* in the North Atlantic. Fisheries Research Board of Canada Translation Series 1972, **2529**.

- Gurbutt, P.A. 1988. Mixing rates on the continental slope derived from radium measurements. In: Guary, J.C., Guegueniat, p. and Pentreath, R.J. (eds.), Radionuclides; a tool for oceanography. Elsevier Applied Science Publications, London.
- Gushchin, A.V. and Podrazhanskaya, S.G. 1984. Feeding of roundnose grenadier (*Coryphaenoides rupestris*) and its trophic relationships in the North Atlantic. NATO Scientific Council Studies, **7**, 53-59.
- Haedrich, R.L., and Merrett, N.R. 1992. Production/biomass ratios, size frequencies, and biomass spectra in deep sea demersal fishes. In: Rowe, G.T. and Pariente, V. (eds.), Deep sea food chains and the global carbon cycle. Dordrecht Netherlands Kluwer Academic Publishers, **360**, 157-182.
- Haflidason, H. King, E.L., Laberg, J.S., Gravdal, A., Nygaard, A. Masson, D. and Sejrup, H.P. 1997. The TOBI survey cruise on the Norwegian margin. Abstract, Second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- Hardy, B.L.S. *et al.* 1980. Cruise Report: RRS "Challenger" Cruise 8/80, 10-23 May 1980. Scottish Marine Biological Association, Dunstaffnage, Oban, 22 pp & tables.
- Hargreaves, P.M. 1984. The distribution of Decapoda (Crustacea) in the open ocean and near bottom over an adjacent slope in the northern Northeast Atlantic Ocean during autumn 1979. Journal of the Marine Biological Association of the United Kingdom, **64**, 4, 829-857.
- Hargreaves, P.M. 1985. The distribution of Mysidacea in the open ocean and near bottom over slope regions in the northern North east Atlantic Ocean during 1979. Journal of Plankton Research, **7**, 2, 241-261.
- Hargreaves, P.M., Ellis, C.J. and Angel, M.V. 1984. An assessment of biological processes close to the sea bed in a slope region and its significance to the assessment of sea bed disposal of radioactive waste. Cruise Report of the Institute of Oceanographic Sciences, Wormley, **185**, 121 pp.
- Hargreaves, P.M., Houldcroft, L. and Jones, E. 1995. The vertical distribution of Decapoda (Crustacea) in the Goban Spur of the Porcupine Seabight during April-May 1994 (RRS "Charles Darwin" Cruise 85). Institute of Oceanographic Sciences, Internal Document **356**, 76 pp (Unpublished manuscript).
- Harland, R. 1995. Dinoflagellate cysts from the glacial/postglacial transition in the Northeast Atlantic Ocean. Oceanographic Literature Review, **42**, p.6.
- Harris, M.P. 1984. Movement and mortality patterns of north Atlantic puffins as shown by ringing. Bird Study, **31**, 131-140.
- Harrison, K. 1988. Deep-sea asellota (Crustacea: Isopoda) of the Rockall Trough: preliminary faunal analysis. Ophelia, **28**, 3, 169-182.
- Harrison, N.M., Webb, A. and Leaper, G.M. 1994. Patterns in seabird distribution west of Scotland. Aquatic Conservation: Marine and Freshwater Ecosystems, **4**, 21-30.
- Harrison, N.M., Webb, A., Leaper, G.M. and Steele, D. 1989. Seabird distributions and the movements of moulting auks west of Scotland and the northern Irish Sea. Nature Conservancy Council, CSD Report, **994**.
- Hartmann - Schroeder, G. 1983. On the knowledge of some polychaetes from the Northeast Atlantic inhabiting foraminifera tests. Mitt. Hamb. Zool. Mus. Inst., **80**, 169-176.
- Hartnoll, R.G. and Rice, A.L. 1985. Further studies on the biology of the deep sea spider crab *Dorhynchus thomsoni*: Instar sequence and the annual cycle. In: Gibbs, P.E. (ed.), Proceedings of the Nineteenth European Marine Biology Symposium: Plymouth, Devon, U.K., 16-21 September 1984, 231-244.

- Hartnoll, R.G., Rice, A.L. and Attrill, M.J. 1992. Aspects of the biology of the galatheid genus *Munida* (Crustacea, Decapoda) from the Porcupine Seabight, Northeast Atlantic. *Sarsia*, **76**, 4, 231-246.
- Harvey, R. 1986. Sampling deep sea benthos. The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh, **88B**, 305-306.
- Harvey, R. and Gage, J.D. 1984. Observations on the reproduction and postlarval morphology of pourtalesiid sea urchins in the Rockall Trough area (N.E. Atlantic Ocean). *Marine Biology*, **82**, 2, 181-190.
- Harvey, R. and Gage, J.D. 1988. Echinoderm distributions in the Rockall Trough and adjacent areas. In: Fifth Deep-Sea Biology Symposium, Brest 26 June - 1 July 1988: Programme and Abstracts, Brest: IFREMER, p.54.
- Harvey, R., Gage, J.D., Billett, D.S.M., Clark, A.M. and Paterson, G.L.J. 1988. Echinoderms of the Rockall Trough and adjacent areas. 3. Additional records. *Bulletin of the British Museum of Natural History (Zoology)*, **54**, 153-198.
- Heaps, N.S., Huthnance, J.M., Jones, J.E. and Wolf, J. 1988. Modelling of storm driven waves north of Scotland - I. Idealised models. In: *Continental Shelf Research*, **8**, 11, 1187-1210.
- Heessen, H.J.L. and Kuiter, C.J. 1991. Some observations on greater argentine (*Argentina silus*) from samples collected in 1990 during an experimental fishery. Council Meeting of the International Council for the Exploration of the Sea (La Rochelle (France)) (26 Sept. 4 Oct. 1991). Copenhagen, Denmark ICES, 13 pp.
- Heessen, H.J.L., Hislop, J.R.G. and Boon, T.W. 1996. An invasion of the North Sea by blue-mouth, *Helicolenus dactylopterus* (Pisces, Scorpaenidae). *ICES Journal of Marine Science*, **53**, 5, 874-877.
- Heinrich, H. 1989. Geologisch-Geomorphologische Untersuchungen in der Westeuropaischen Tiefsee. Deutsches Hydrographisches Institut, Wissenschaftlich-Technische Berichte, 1989-4, 52 pp & 3 charts.
- Hensley, R.T., Beardmore, J.A. and Tyler, P.A. 1995. Genetic variance in *Ophiomusium lymani* (Ophiuroidea: Echinodermata) from lower bathyal depths in the Rockall Trough (Northeast Atlantic). *Marine Biology*, **121**, 3, 469-475.
- Herring, P.J. 1979. RRS "Discovery" cruise 105, 29 August - 23 October 1979. Midwater and benthic sampling in the regions of the Rockall Trough, Porcupine Seabight and northwest African coast, with associated physiological investigations. Institute of Oceanographic Sciences, Cruise Report, **82**, 42 pp & figs.
- Herring, P.J., Angel, M.V., Crisp, N., Fasham, M.J.R., Hargreaves, P.M., Hemmings, J.C.P., Lampitt, R.S., Pugh, P.R. and Roe, H.S.J. 1996. Shelf break ecosystems off Europe, North Africa and the northwest Indian Ocean. Final Report, Southampton Oceanographic Centre, 111 pp, figs., & CD-ROM.
- Hill, P.R. and Kidd, R.B. 1985. Mid-ocean sediment drifts; sediment waves in a pelagic regime. Program with abstracts. Geological Association of Canada; Mineralogical Association of Canada; Canadian Geophysical Union joint annual meeting, **10**, A27.
- Hillis, J.P. 1988. The Nephrops of the Porcupine Bank. Council Meeting of the International Council for the Exploration of the Sea (Bergen, Norway, 6 Oct. 1988). Copenhagen, Denmark, ICES, 6 pp.
- Hillis, J.P. and Geary, M. 1991. The Irish fishery for Nephrops on the Porcupine Bank. Council Meeting of the International Council for the Exploration of the Sea, Copenhagen (Denmark), 4-12 Oct. 1990. Copenhagen, Denmark, ICES, 1990, 15 pp.
- Hogg, N.G. 1983. Observational evidence for an eddy-driven deep circulation in the North Atlantic. In: Magaard, L., Muller, P. and Pujalet, R. (eds.), *The Role of Eddies in the General Ocean Circulation*,

- Proceedings, 'Aha Huliko'a, Hawaiian Winter Workshop, University of Hawaii at Manoa, January 5-7, 1983. Hawaii Institute of Geophysics, Special Publication, 175-198.
- Holligan, P.M. and Groom, S.B. 1986. Phytoplankton distributions along the shelf break. The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh, **88B**, 239-263.
- Holmes, N. 1982. Diel vertical variations in abundance of some planktonic foraminifera from the Rockall Trough, northeastern Atlantic Ocean. Journal of Foraminiferal Research, **12**, 145-150.
- Holmes, N. 1983. PhD on meiobenthos of two sites west of Ireland and in SW Porcupine Seabight (1973-1983). University of Aberystwyth, Wales.
- Holmes, R., Long, D. and Dodd, L.R. 1998. Large-scale debrites and submarine landslides on the Barra Fan, west of Britain. In: Stoker, M.S., Evans, D. and Cramp, A. (Eds.) Geological processes on continental margins: sedimentation, mass-wasting and stability. Geological Society London Special Publication, No. 129.
- Holt, E.W.L. and Byrne, L.W. 1905. First report on the fishes of the Irish Atlantic slope. Fisheries Ireland Scientific Investigations II.
- Holt, E.W.L. and Byrne, L.W. 1908. Second report on the fishes of the Irish Atlantic slope. Fisheries Ireland Scientific Investigations V.
- Holt, E.W.L. and Byrne, L.W. 1908. Third report on the fishes of the Irish Atlantic slope. Fisheries Ireland Scientific Investigations IV.
- Holt, E.W.L. and Byrne, L.W. 1908. Third report on the fishes of the Irish Atlantic slope. Fisheries Ireland Scientific Investigations V.
- Holt, E.W.L. and Byrne, L.W. 1910. Fifth report on the fishes of the Irish Atlantic slope. Fisheries Ireland Scientific Investigations VI.
- Holt, E.W.L. and Byrne, L.W. 1912. Sixth report on the fishes of the Irish Atlantic slope. Fisheries Ireland Scientific Investigations I&II.
- Hopper, A.G. 1995. Deep-water fisheries of the North Atlantic oceanic slope. Kluwer Academic Publishers.
- Hopper, A.G. 1995. Proceedings of NATO Advanced Research Workshop on deep-water fisheries of the North Atlantic slope. Amsterdam: Kluwer Academic Press, 420 pp.
- Horsfall, I.M. and Wolff, G.A. 1997. Hydrolysable amino acids in sediments from the Porcupine Abyssal Plain, Northeast Atlantic Ocean. Organic Geochemistry, **26**, 5-6.
- Hovland, M. 1989. The formation of pockmarks and their potential influence on offshore construction. Quarterly Journal of Engineering Geology, **22**, 131-138.
- Hovland, M. 1991. Large pockmarks, gas charged sediments and possible clay diapirs in the Skagerrak. Marine and Petroleum Geology, **8**, 316-331.
- Hovland, M., Croker, P.F. and Martin, M. 1994. Fault associated seabed mounds (carbonate knolls?) off western Ireland and north-west Australia. Marine and Petroleum Geology, **11**, 232-246.
- Hovland, M., Judd, A.G. and King, L.H. 1984. Characteristic features of pockmarks on the North Sea floor and Scotian shelf. Sedimentology, **31**, 471-480.
- Hovland, M., Tablot, M.R., Quale, H., Olaussen, S. and Aasberg, L. 1987. Methane related carbonate cements of the North Sea. Journal of Sedimentary Petrology, **57**, 881-892.
- Howe, J.A. 1991. Sedimentation and climate induced sediments on Feni Ridge, northeast Atlantic Ocean.



- Howe, J.A. 1994. Bottom currents, contourites and related sedimentation in the northern Rockall Trough, North Atlantic Ocean. University of Southampton, Faculty of Science. Geology, PhD Thesis, 259 pp (Unpublished Thesis).
- Howe, J.A. 1995. Sedimentary processes and variations in slope-current activity during the last Glacial-Interglacial episode on the Hebrides Slope, northern Rockall Trough, North Atlantic Ocean. *Sedimentary Geology*, **96**, 201-230.
- Howe, J.A. 1996. Turbidite and contourite sediment waves in the northern Rockall Trough, North Atlantic Ocean. *Sedimentology*, **43**, 219-234.
- Howe, J.A. and Humphery, J.D. 1995. Photographic evidence for slope-current activity, Hebrides Slope, NE Atlantic Ocean. *Scottish Journal of Geology*, **30**, 107-115.
- Howe, J.A., Stoker, M.S. and Stow, D.A.V. 1994. Late Cenozoic sediment drift complex, northeast Rockall Trough, North Atlantic. *Palaeoceanography*, **9**, 989-999.
- Huang, W.G., Cracknell, A.P., Vaughan, R.A. and Davies, P.A. 1991. A satellite and field view of the Irish Shelf Front. *Continental Shelf Research*, **11**, 543-562.
- Huggett, Q. 1985. The distribution of glacial erratics in the Northeast Atlantic: Final report. Report of the Institute of Oceanographic Sciences, Wormley, **213**, 98 pp.
- Huthnance, J.M. 1985. Oceanography of the continental margin. *NERC News Journal*, **3**, 8-11.
- Huthnance, J.M. 1986. The Rockall slope current and shelf-edge processes. *Proceedings of the Royal Society of Edinburgh*, **88B**, 83-101.
- Huthnance, J.M., Blackman, D.L., Dolman, M., Eastman, S., MacDonald, D.C., Stainthorpe, C. and Wolf. 1989. An investigation of the meteorological effects of currents in the shelf and continental slope areas of the northwest of the U.K. *Proudman Oceanographic Laboratory Report*, **6**, 115 pp.
- Hydrographic Department. 1994. Porcupine Bank to the Bay of Biscay: bathymetric contour chart. Taunton Hydrographic Department. Scale 1:458,300 at 53. (C7819).
- Hydrographic Department. 1994. Porcupine Bank to the Bay of Biscay: bathymetric contour chart. Isengard Ridge Porcupine Bank. Taunton Hydrographic Department. Scale 1:730,000 at 53. (C7819.1).
- Hydrographic Department. 1994. Porcupine Bank to the Bay of Biscay: bathymetric contour chart. 1°00'W - 12°04.7'W; 45°06.2'N - 49°53'N. Taunton Hydrographic Department. Scale 1: 730,000 at 53. (C7819.4).
- Hydrographic Department. 1994. Porcupine Bank to the Bay of Biscay: bathymetric contour chart. 1°00'W - 22°17.6'W; 45°06.2'N - 53°46'N. Taunton Hydrographic Department. Scale 1:1,458,300 at 53. (C7819).
- Hydrographic Department. 1994. Porcupine Bank to the Bay of Biscay: bathymetric contour chart. 11°13'W - 22°17'W; 45°06.2'N - 49°53'N. Taunton Hydrographic Department. Scale 1: 730,000 at 53. (C7819.3).
- Hydrographic Department. 1994. Porcupine Bank to the Bay of Biscay: bathymetric contour chart. 11°13'W - 22°17'W; 49°22.3'N - 53°46'N. Taunton Hydrographic Department. Scale 1: 730,000 at 53. (C7819.1).
- Ingle, R.W. and Rice, A.L. 1984. The juvenile stages of eight swimming crab species (Crustacea: Brachyura: Portunidae), a comparative study. *Bulletin of the British Museum of Natural History, Zoology*, **46**, 4, 345-354.

Institut für Meereskunde der Universität Hamburg. 1991. Research vessel "Meteor" Cruise 17 (1991): northern North Atlantic. Hamburg: Institut für Meereskunde der Universität Hamburg, 34 pp (Sonderforschungsbereich 313 der Universität Kiel).

Institute of Oceanographic Sciences 1974. Submersible investigations of the geology and benthos of the Rockall Bank. Institute of Oceanographic Sciences, Cruise Report, **1**.

Institute of Oceanographic Sciences. 1982. RRS "Frederick Russell" Cruise 82/2. March 16 - March 29 1982. Current measurements and hydrography on the Rockall Trough and Faroe Shetland Channel. Cruise Report of the Institute of Oceanographic Science, Wormley, **127**, 8 pp.

Institute of Oceanographic Sciences. 1983. RRS "Challenger" Cruise 8/82: 21 May - 7 June 1982. Instrument and hardware trials in the Porcupine Seabight. Cruise Report of the Institute of Oceanographic Science, Wormley, **143**, 24 pp.

Institute of Oceanographic Sciences 1984. RRS "Challenger" Cruise 6/83 (IOS Cruise 517) 7 April - 8 May 1983. Benthic and mid-water biology of the Porcupine Seabight. Cruise Report of the Institute of Oceanographic Science, Wormley, **159**, 27 pp.

Isaev, N.A. 1988. Results of blue whiting investigations west of the Irish coast in spring 1987. Council Meeting of the International Council for the Exploration of the Sea (Bergen, Norway, 6 Oct. 1988). Copenhagen, Denmark, ICES, 13 pp.

Isaev, N.A. 1990. Results of research on blue whiting to the west of Irish coast in spring 1989. Council Meeting of the International Council for the Exploration of the Sea, Copenhagen (Denmark), 4-12 Oct. 1990. Copenhagen, Denmark ICES 1990, 10 pp.

Issev, N.A. and Belikov, S.V. 1990. Results of Soviet investigations on blue whiting in the Northeast Atlantic in spring 1989. Council Meeting of the International Council for the Exploration of the Sea, Copenhagen (Denmark), 4-12 October 1990. Copenhagen, Denmark, ICES, 10 pp.

Isaev, N.A. and Seliverstov, A.S. 1991. Population structure of the Hebridean Norwegian school of blue whiting, *Micromesistius poutassou*. Journal of Ichthyology, **31**, 4, 45-58.

Isaev, N.A., Belikov, S.V. and Shleinik, V.N. 1988. Results of the Soviet blue whiting investigations in the Northeast Atlantic in spring 1987. Council Meeting of the International Council for the Exploration of the Sea (Bergen, Norway, 6 Oct. 1988). Copenhagen, Denmark, ICES, 15 pp.

Isaev, N.A., Seliverstov, A.S., Tret'yak, V.L. and Korzhev, V.A. 1992. Population dynamics of the Hebrides and Porcupine populations of blue whiting, *Micromesistius poutassou*, and their rational exploitation. Journal of Ichthyology **32**, 9, 32-42; Vopr. Ikhtiol., **32**, 4, 62-70.

Isaev, N.A., Tret'yak, V.L. and Korzhev, V.A. 1990. Population structure of the northern stock of blue whiting. Rybn. Khoz., **12**, 30-34.

Isaev, N.A., Tret'yak, V.L. and Korzhev, V.A. 1991. Dynamics and rational utilization of the Hebridean and Porcupine blue whiting stocks. Council Meeting of the International Council for the Exploration of the Sea (La Rochelle, France, 26 Sept. - 4 Oct. 1991). Copenhagen, Denmark, ICES, 25 pp.

Ivanov, M., Kenyon, N.H., Henriët, J-P., Swennen, R., Limonov, A. and TTR-7 Shipboard Party. 1998. Carbonate mud mounds and cold water corals in the Porcupine Seabight and Rockall Bank: are they methane related? Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium p.37.

Jackson, P.A.B., Thurston, M.H. and Rice, A.L. 1991. Station data for the IOS Benthic Biological Survey of the Porcupine Seabight region (NE Atlantic) 1977-89. Report of the Institute of Oceanographic Science, Deacon Laboratory 1991, **281**, 88 pp.

- James, I.D. 1982. Tidal currents at two deep sea moorings near the shelf edge. *Deep Sea Research*, **29**, 9A, 1099-1111.
- Jensen, A. and Frederiksen, R. 1992. The fauna associated with the bank-forming deepwater coral *Lophelia pertusa* (Scleractinaria) on the Faeroe shelf. *Sarsia*, **77**, 53-69.
- Jian, C. and Mienert, J. 1996. Linking physical property records of Quaternary sediments to Heinrich events. *Marine Geology*, **131**, 1-2.
- John, H.Ch. and Kloppmann, M. 1989. Ontogenetic changes in the vertical distribution of larval *Maurolicus muelleri* (Gmelin, 1789). *Archive fur Fischereiwissenschaft*, **39**, 2, 79-93.
- Johnson, G.L., Vogt, P.R. and Schneider, E.D. 1969. Morphology, magnetic anomalies and evolution of northeast Atlantic and Labrador Sea. Part 1, Morphology. *Eos, Transactions, American Geophysical Union*, **50**, 4, pp.184.
- Johnson, G.L., Vogt, P.R. and Schneider, E.D. 1971. Morphology of the North-Eastern Atlantic and Labrador Sea. *Deutsche Hydrographische Zeitschrift*, **24**, 2, 49-73.
- Joint, I.R. and Pomroy, A.J. 1986. Photosynthetic characteristics of nanoplankton and picoplankton from the surface mixed layer. *Marine Biology*, **92**, 4, 465-474.
- Jones, B.W. 1982. A stock assessment of haddock on Rockall Bank. Council Meeting, 1982, of the International Council for the Exploration of the Sea (Copenhagen, Denmark, 11 Oct. 1982). Copenhagen, Denmark, ICES, 13 pp.
- Jones, N.S. 1986. The Cumacea (Crustacea) of the INCAL cruise. The Oceanography of the Rockall Channel. 1986. Proceedings of the Royal Society of Edinburgh, **88B**, 306-307.
- Jones, P.H. and Tasker, M.L. 1982. Seabird movements around the coast of Great Britain and Ireland. Aberdeen, Nature Conservancy Council, Seabird Group.
- Jones, R.W. 1986. Distribution of morphogroups of Recent agglutinating foraminifera in the Rockall Trough, a synopsis. The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh, **88B**, 55-58.
- Karasiova, E.M. 1986. Cannibalism in blue whiting (*Micromesistius poutassou* (Risso)) during the spawning period. Council Meeting of the International Council for the Exploration of the Sea (Copenhagen, Denmark, 9 Oct. 1986). Copenhagen, Denmark, ICES, 12 pp.
- Kawaguchi, K. and Mauchline, J. 1982. Biology of myctophid fishes (family Myctophidae) in the Rockall Trough, northeastern Atlantic Ocean. *Biological Oceanography*, **1**, 4, 337-373.
- Kelly, C.J., Clarke, M. and Connolly, P.L. 1997. Catch and discards from a deep-water trawl survey in 1996. Fishery leaflet **175**, Marine Institute, Dublin.
- Kelly, C.J., Connolly, P.L. and Bracken, J.J. 1996. Maturity, oocyte dynamics and fecundity of the roundnose grenadier from the Rockall Trough. *Journal of Fish Biology*, **50**, 1-17.
- Kelly, C.J., Connolly, P.L. and Bracken, J.J. 1997. Age estimation, growth, maturity and distribution of the roundnose grenadier from the Rockall Trough. *Journal of Fish Biology*, **50**, 1, 1-17.
- Kelly, C.J., Connolly, P.L. and Bracken, J.J. In Press. Age estimation, growth, maturity and distribution of the bluemouth rockfish *Helicolenus dactylopterus* from the Rockall Trough.
- Kelly, K.S. and Costello, M.J. 1996. Marine-related papers published in The Irish Naturalists' Journal, 1925-1994. *Oceanographic Literature Review*, **43**, 5.

- Kennedy, T. 1996. Cruise summary. ENAM 96 Pelagia 05/08/96 to 22/08/96. Unpublished report for Department of Transport, Energy and Communications - Petroleum Affairs Division, Irish Marine Data Centre, 22 pp.
- Kenyon, N.H. 1986. Evidence from bedforms for a strong Poleward Current along the continental slope of Northwest Europe. *Marine Geology*, **72**, 187-198.
- Kenyon, N.H. 1987. Mass-wasting features on the continental slope of northwest Europe. *Marine Geology*, **74**, 57-77.
- Kenyon, N.H. 1997. Turbidity currents in the Porcupine Seabight Channels and the Gemini North Cable. Unpublished Report for Cable and Wireless Marine Ltd., Chelmsford, pp.8.
- Kenyon, N.H. 1997. North Atlantic floating university facility - the 1997 cruise. [www.unesco.org/ioc/news/items/1997/news136.html](http://www.unesco.org/ioc/news/items/1997/news136.html)
- Kenyon, N.H. 1997. Results of Training Through Research cruise. Abstract, Second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- Kenyon, N.H. and Stride, A.H. 1970. The tide swept continental shelf. Sediments between the Shetland Isles and France. *Sedimentology*, **14**, 159-173.
- Kenyon, N.H., Belderson, R.H. and Stride, A.H. 1978. Channels, canyons and slump folds on the continental slope between southwest Ireland and Spain. *Oceanologica Acta*, **1**, 369-380.
- Kenyon, N.H., Ivanov, M., Akhmetjanov, A. and New, A. 1998. The current swept continental slope and giant carbonate mounds to the west of Ireland. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.41.
- Kenyon, N.H., Kuipers, A., Nielsen, T. and Taylor, J. 1998. Neogene seismic pattern and current pathways west of Faeroe Bank channel. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium.
- Kerry, N.J., Burt, R.J., Lane, N.M. and Bagg, M.T. 1984. Simultaneous radar observations of surface slicks and in situ measurements of internal waves. *Journal of Physical Oceanography*, **14**, 8, 1419-1423.
- Ketzler, C. 1983. The kinematics of tides in the Rockall area. Dipl. Biol, Universitaet, Kiel (FRG). Math nat. Fakultaet, **112**, 71 pp.
- Kidd, R.B. 1982. Long range sidescan sonar studies of sediment slides and the effects of slope mass sediment movement on abyssal plain sedimentation. In: Saxov, S. and Nieuwenhuis, J.K. (eds.), *Marine slides and other mass movements*, 6, 289-303.
- Kidd, R.B. 1986. Sedimentation on mid-ocean sediment drifts.
- Kidd, R.B. 1987. Sedimentation of Feni and Gardar sediment drifts. Initial Reports of the Deep Sea Drilling Project, **94**. US Government Printing Office, Washington DC, 1217-1244.
- Kidd, R.B. 1991. Sedimentation and climate-induced sediments on Feni Ridge, Northeast Atlantic Ocean.
- Kidd, R.B. and Hill, P.R. 1986. Sedimentation on mid-ocean sediment drifts. In: Summerhayes, C.P. and Shackleton, N J. (eds.), *North Atlantic Palaeoceanography*. Geological Society, London, Special Publication, **21**, 87-102.

- Kidd, R.B. and Hill, P.R. 1987. Sedimentation on Feni and Gardar sediment drifts. Initial Reports of the Deep Sea Drilling Project, **94**. US Government Printing Office, Washington DC, 1217-1244.
- Kidd, R.B. and Roberts, D.G. 1982. Long range sidescan sonar studies of large-scale sedimentary features in the north Atlantic. Bulletin Institute Géologie Bassin d'Aquitaine, **31**, 11-29.
- Kidd, R.B., Ruddiman, W.F., Dolan, J.F., Eggers, M.R., Hill, P.R., Keigwin, L.D., Mitchell, M., Philips, I., Robinson, F., Salehipour, S., Takayama, T., Thomae, E., Unsold, G. and Weaver, P.P.E. 1983. Sediment drifts and intraplate tectonics in the North Atlantic. Nature, **306**, 532-533.
- Kloppmann, M. 1989. Composition, abundance and vertical distribution of fish larvae above Hatton and Rockall Bank (West of Britain). Archive fur Fischereiwissenschaft, **39**, 2, 95-110.
- Knappertsbusch, M. and Brummer, G.J.A. 1995. A sediment trap investigation of sinking coccolithophorids in the North Atlantic. Deep Sea Research, **42**, 1083-1109.
- Kock, K.H. 1983. Fishery biological investigations on Rockall Bank and west of the British Isles. (56 Cruise of FRV Walther Herwig in January/February 1983). Inf. Fischwirtsch., **30**, 1, 4-8.
- Krylov, O.V. 1998. Distribution of corals and bottom current in the Porcupine Seabight and on the Porcupine Bank, NE Atlantic (from underwater TV and sidescan sonar survey). Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.103.
- Kuijpers, A. and Shipboard Scientific Party 1997. A deep-tow side scan sonar study of Norwegian Sea overflow pathways off the Faeroe Islands. Abstract, second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- Kuijpers, A., Andersen, M.S., Kenyon, N.H., Kunzendorf, H. and van Weering, T.C.E. 1998. Quaternary sedimentation and Norwegian Sea overflow pathways around Bill Bailey Bank, NE Atlantic. Marine Geology, ENAM Special Issue (in press).
- Labracherie, M. and Moyes, J. 1978. Importance of the radiolarians as indicators of deep oceanic circulation. As for example, Northeast Atlantic Ocean in the Rockall and Faeroe Regions. Compte Rendu Hebd. Seances Academie Scientifique, Paris, Serie D, **286**, 20, 1425-1428.
- Lambert, C.E., Risler, N., Dehairs, F., Yokoyama, F., Nguyen, H.V. and Chesselet, R. 1984. Formation and chemical characterization of recent sediments in two areas of continental slopes. Tenth Annual Meeting On Earth Sciences, Bordeaux, 2-6 April 1984, **10**, p.331.
- Lambshead, P.J.D. and Blatt, H.M. 1979. Bathyeurystomina, a new genus of free-living marine nematodes (Enchelidiidae) from the Rockall Trough. Cah. Biol. Mar., **20**, 3, 371-380.
- Lambshead, P.J.D. and Gooday, A.J. 1990. The impact of seasonally deposited phytodetritus on epifaunal and shallow infaunal benthic foraminiferal populations in the bathyal Northeast Atlantic: The assemblage response. Deep Sea Research, A, Oceanographic Research Paper, **37**, 8A, 1263-1283.
- Lambshead, P.J.D., Elce, B.J., Thistle, D., Eckman, J.E. and Barnett, P.R.O. 1996. A comparison of the biodiversity of deep-sea marine nematodes from three stations in the Rockall Trough, Northeast Atlantic, and one station in the San Diego Trough, northeast Pacific. Oceanographic Literature Review, **43**, 2.
- Lambshead, P.J.D., Ferrero, T.J. and Wollf, G.A. 1995. Comparison of the vertical distribution of nematodes from two contrasting abyssal sites in the Northeast Atlantic subject to different seasonal inputs of phytodetritus. International Review of Gesamt. Hydrobiology, **80**, 2, 327-331.
- Lampitt, R.S. 1985. Evidence for the seasonal deposition of detritus to the deep sea floor and its subsequent resuspension. Deep Sea Research, **32**, 8A, 885-897.

- Lampitt, R.S. 1995. Studies in the Porcupine Seabight and their relevance to OMEX. Brussels: OMEX c/o University of Brussels, 44 pp (Unpublished manuscript).
- Lampitt, R.S., Billett, D.S.M. and Rice, A.L. 1986. The biomass of the invertebrate megabenthos from 500 to 4100m in the Northeast Atlantic. *Marine Biology*, **93**, 69-81.
- Lampitt, R.S., Hillier, W.R., and Challenor, P.G. 1993. Seasonal and diurnal variation in the open ocean concentration of marine snow aggregates. *Nature*, **362**, 6422, 737-739.
- Lampitt, R.S., Merrett, N.R. and Thurston, M.H. 1983. Inter-relations of necrophagous amphipods, a fish predator, and tidal currents in the deep sea. *Marine Biology*, **74**, 1, 73-78.
- Lampitt, R.S., Raine, R.C.T., Billett, D.S.M. and Rice, A.L. 1996. Material supply to the European continental slope: a budget based on benthic oxygen demand and organic supply. *Deep Sea Research*, **1**, Oceanographic Research Paper, **42**, 11-12, 1865-1880.
- Leatherland, T.M., Burton, J.D., Culkin, F., McCartney, M.J. and Morris, R.J. 1973. Concentration of some metals in pelagic organisms and of mercury in Northeast Atlantic Ocean water. *Deep Sea Research*, **20**, 679-685.
- Lee, A.J. and Ramster, J.W. 1981. Atlas of the seas around the British Isles. London, Ministry of Agriculture, Fisheries and Food.
- LeGall, A.C. 1997. Hydrography in the Northeast Atlantic, with particular emphasis on the OMEX area. [Www.npm.ac.uk/rsdas/omex/atlas/water.html](http://www.npm.ac.uk/rsdas/omex/atlas/water.html), 2pp.
- Leopold, M.F. and Couperus, A.S. 1995. Sightings of Atlantic white-sided dolphins *Lagenorhynchus acutus* near the south-eastern limit of the known range in the north-east Atlantic. *Lutra*, **38**, 77-80.
- Leopold, M.F., Wolf, P.A. and van der Meer, J. 1992. The elusive harbour porpoise exposed: strip transect counts off south-western Ireland. *Netherlands Journal of Sea Research*, **29**, 4, 395-402.
- Lightfoot, R.H. Tyler, P.A. and Gage, J.D. 1979. Seasonal reproduction in deep sea bivalves and brittlestars. *Deep Sea Research*, **26**, 8A, 967-973.
- Lincoln, R.J. 1985. Deep-sea asellote isopods of the north-east Atlantic: The family *Haploniscidae*. *Journal of Natural History*, **19**, 4, 655-695.
- Lloyd, C., Tasker, M.L. and Partridge, K. 1991. In: London, T. and Poyser, A.D. (eds.), The status of seabirds in Britain and Ireland.
- Lockwood, S.J. 1985. Marine environment data inventory for the Bay of Biscay, Celtic Sea and west of Ireland, March July 1977. Fish. Res. Data Rep. Dir. Fish. Res. G.B, **6**, 44 pp.
- Long, D. 1998. Sampling corals west of Shetland. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.105.
- Long, D., Roberts, M., Gaga, J. and Chenery, S. 1998. A multi-disciplinary study of *Lophelia pertusa* in the Faeroe-Shetland Channel. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.71.
- Lonsdale, P.A. 1982. Sediment drifts of the Northeast Atlantic and their relationship to the observed abyssal currents. *Bulletin Institute Géologie Bassin d'Aquitaine*, **31-32**, 141-149.
- Lonsdale, P.A. and Hollister, C.D. 1979. A near bottom traverse of Rockall Trough: hydrographic and geologic inferences. *Oceanologica Acta*, **2**, 91-105.

- Lonsdale, P.A. and Spiess, F.N. 1977. Abyssal bedforms explored with a deeply towed instrument package. *Marine Geology*, **23**, 57-75.
- Loubere, P.A., Banonis, G. and Jakiel, R. 1988. *Globocassidulina Subglobosa* (Brady): Environmental control of species abundance and specimen test size. *Journal of Foraminiferal Research*, **18**, 1, 6-15.
- McCartney, B.S. and Huthnance, J.M. 1995. Cruise Report: RRS Charles Darwin Cruise 91, Leg A 2-22 March 1995, Leg B 22 March - 2 April 1995. LOIS Shelf Edge Study. Proudman Oceanographic Laboratory, Birkenhead.
- McCave, I.N. 1986. Epilogue: Recommendations of the Workshop Session. The Oceanography of the Rockall Channel. *Proceedings of the Royal Society of Edinburgh*, **88B**, 291-298.
- McCave, I.N. 1994. Cruise report RRS "Charles Darwin". Cruise 88, 25th July - 15th August 1994, Reykjavik to Ponta Delgada. Northeast Atlantic palaeoceanography and climate change research project of NERC. Department of Earth Sciences, University of Cambridge, Cambridge, 45 pp.
- McCave, I.N. 1995. Sedimentary processes and the creation of the stratigraphic record in the Late Quaternary North Atlantic Ocean. *Philosophical Transactions of the Royal Society of London*, **B348**, 229-241.
- McCave, I.N. and NEAPCC Investigators 1988. Northeast Atlantic palaeoceanography: a climate change-driven system in the late Quaternary. Abstract, Geoscience 1998, 14-18 April 1998, Keele University.
- McCave, I.N., Lonsdale, P.F., Hollister, C.D. and Gardner, W.D. 1980. Sediment transport over the Hatton and Gardar contourite drifts. *Journal of Sedimentary Petrology*, **50**, 4, 1049-1062.
- McCave, I.N., Manighetti, B. and Beveridge, N.A.S. 1995. Circulation in the glacial North Atlantic inferred from grain size measurements. *Nature*, **374**, 149-152.
- McCormick, R. 1992. The potential deep water species fishery in the North Atlantic. Irish Sea Fisheries Board (BIM), Unpublished Report, January 1992.
- MacDonald, R.A. 1987. The breeding population and distribution of the cormorant in Ireland. *Irish Birds*, **3**, 405-416.
- McDonnell, A. and Shannon, P. 1998. The geological development of the Porcupine Basin. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium p.39.
- McMahon, T., Raine, T., and Silke, J. 1997 In Press. Oceanographic control of harmful phytoplankton blooms around southwest Ireland. In: *Proceedings of the VIII International Conference on Harmful Algae*.
- McMahon, T., Raine, T., Titov, O. and Boychuk, S. 1995. Some oceanographic features of northeastern Atlantic waters west of Ireland. *ICES Journal of Marine Science*, **52**, 221-232.
- Maciolek, N.J. 1981. A new genus and species of Spionidae (Annelida: Polychaeta) from the North and South Atlantic. *Proceedings of the Biological Society of Washington*, **94**, 1, 228-239.
- Macurda, D.B., Jr. and Nelson, H.R., Jr. 1987. Interactive interpretation of a submarine fan offshore Ireland, a case history. European Association of Exploration Geophysicists 49th Meeting: The Sava Conference Center, Belgrade, Yugoslavia, 9-12 June 1987. Technical Programme And Abstracts Of Papers. European Association of Exploration Geophysicists, The Hague, Netherlands, p.17.
- Madden, B. and Rutledge, R.F. 1993. Little gulls in Ireland, 1970-1991. *Irish Birds*, **5**, 23-34.

- Maier, K., Gormley, T.R., Connolly, P.L. and Autry, M. 1997. Assessment of underutilised fish species. Teagasc, Farm and Food, Vol.7, No.2, Summer 1997.
- Manighetti, B. and McCave, I.N. 1995. Late glacial and Holocene palaeocurrents around Rockall Bank, NE Atlantic Ocean. *Paleoceanography*, **10**, 611-626.
- Manighetti, B. and McCave, I.N. 1996. Depositional fluxes, palaeoproductivity, and ice rafting in the NE Atlantic over the past 30 ka. *Oceanographic Literature Review*, **43**, p.1.
- Masson, D.G. *et al.* 1990. RRS Charles Darwin Cruise 52, 25 Aug-13 Sept 1990. Multichannel seismic reflection survey of the southern margin of the Rockall Plateau. UK Natural Environmental Research Council, IOS - Cruise report.
- MAST. 1997. Marine Science and Technology Programme (MAST III) Projects. [www.Europa.eu.int/comm/dg12/marine/pr-5.html](http://www.Europa.eu.int/comm/dg12/marine/pr-5.html), 2 pp.
- MAST. 1997. MAST III - Poseidon, overview. [www.soc.soton.ac.uk/CHD/poseidon/overview.html](http://www.soc.soton.ac.uk/CHD/poseidon/overview.html), 5 pp.
- Mathis, B. and Sibuet, J.C. 1984. Continuity of the Eocene deformation from the Bay of Biscay to Porcupine Bight. Tenth Annual Meeting On Earth Sciences, Bordeaux. 2-6 April 1984, **10**, p.386.
- Mauchline, J. 1982. The predation of mysids by fish of the Rockall Trough, northeastern Atlantic Ocean. *Hydrobiologia*.
- Mauchline, J. 1984. Pycnogonids caught in bathypelagic samples from the Rockall Trough, northeastern Atlantic Ocean. *Journal of Natural History*, **18**, 2, 315-322.
- Mauchline, J. 1985. Growth and production of Euphausiacea (Crustacea) in the Rockall Trough. *Marine Biology*, **90**, 1, 19-26.
- Mauchline, J. 1986. A review of the ecology of the deep water pelagic fauna of the Rockall Trough. The Oceanography of the Rockall Channel. *Proceedings of the Royal Society of Edinburgh*, **88B**, 145-157.
- Mauchline, J. 1986. The biology of the deep-sea species of Mysidacea (Crustacea) of the Rockall Trough. *Journal of the Marine Biology Association of the United Kingdom*, **66**, 4, 803-824.
- Mauchline, J. 1987. The Oceanography of the Rockall Channel. Symposium on the Oceanography of the Rockall Channel, Edinburgh (UK), 27-29 Mar 1985. *Proceedings of the Royal Society of Edinburgh*, **88B**, 356 pp.
- Mauchline, J. 1988. Growth and breeding of meso- and bathypelagic organisms of the Rockall Trough, northeastern Atlantic Ocean and evidence of seasonality. *Marine Biology*, **98**, 3, 387-393.
- Mauchline, J. 1992. Restriction of body size spectra within species of deep-sea plankton. *Marine Ecology Prog. Ser.* **90**, 1, 1-8.
- Mauchline, J. 1995. Seasonal variation in some population parameters of Euchaeta species (Copepoda: Calanoida). *Oceanographic Literature Review*, **42**, p.5.
- Mauchline, J. and Gage, J.D. 1983. The Nebaliacea (Crustacea: Leptostraca) of the Rockall Trough. *Journal of the Marine Biology Association of the United Kingdom*, **63**, 3, 627-631.
- Mauchline, J. and Gordon, J.D.M. 1980. The food and feeding of the deep sea morid fish *Lepidion eques* (Gunther, 1887) in the Rockall Trough. *Journal of the Marine Biology Association of the United Kingdom*, **60**, 4, 1053-1059.
- Mauchline, J. and Gordon, J.D.M. 1983. Diets of the sharks and chimaeroids of the Rockall Trough, northeastern Atlantic Ocean. *Marine Biology*, **75**, 2-3, 269-278.



- Mauchline, J. and Gordon, J.D.M. 1983. Diets of clupeoid, stomiatoid and salmonoid fish of the Rockall Trough, northeastern Atlantic Ocean. *Marine Biology*, **77**, 1, 67-78.
- Mauchline, J. and Gordon, J.D.M. 1984. Diets and bathymetric distributions of the macrourid fish of the Rockall Trough, northeastern Atlantic Ocean. *Marine Biology*, **81**, 107-121.
- Mauchline, J. and Gordon, J.D.M. 1984. Feeding and bathymetric distribution of the gadoid and morid fish of the Rockall Trough. *Journal of the Marine Biology Association of the United Kingdom*, **64**, 657-665.
- Mauchline, J. and Gordon, J.D.M. 1984. Occurrence and feeding of berycomorphid and percomorphid teleost fish in the Rockall Trough. *Jour. Cons. Ciém.*, **41**, 3, 239-247.
- Mauchline, J. and Gordon, J.D.M. 1986. Foraging strategies of deep-sea fish. *Marine Ecology - Progress Series*, **27**, 3, 227-238.
- Mauchline, J. and Gordon, J.D.M. 1991. Oceanic pelagic prey of benthopelagic fish in the benthic boundary layer of a marginal oceanic region. *Marine Ecology - Progress Series*, **74**, 2-3, 109-115.
- Mauchline, J. and Harvey, P.F. 1983. The scyphomedusae of the Rockall Trough, northeastern Atlantic Ocean. *Journal of Plankton Research*, **5**, 6, 881-890.
- Mauchline, J., Ellett, D.J., Gage, J.D. and Gordon, J.D.M. 1986. A bibliography of the Rockall Trough. *Proceedings of the Royal Society of Edinburgh*, **88B**, 319-354.
- Mazhirina, G.P. 1992. Peculiarities of ovarian development in *Benthoosema glaciale* from different North Atlantic areas. In: Savvatimskij, P.I. (ed.), *Studies Of Biological Resources in the North Atlantic. Issledovaniya Bioresursov Severnoj Atlantiki*. Murmansk Russia Izd. Pinro, 203-218.
- Mazurenko, L.L. 1998. Fine sediment from different morphological features of the Porcupine Seabight basin floor. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.107.
- Meadows, P.S. and Tait, J. 1985. Bioturbation, geotechnics and microbiology at the sediment water interface in deep sea sediments. In: Gibbs, P.E. (ed.), *Proceedings of the Nineteenth European Marine Biology Symposium: Plymouth, Devon, U.K., 16-21 September 1984*, 191-200.
- Medler, K.J., Woollorton, J., Jones, S.R. and Read, J.W. 1983. North East Atlantic Dynamics Study: NEADS 6, first deployment October 1977 - June 1978. *Fish. Res. Data Rep. Dir. Fish. Res. G.B.*, **1**, 35 pp.
- Medler, K.J., Woollorton, J., Jones, S.R. and Read, J.W. 1985. Current meter observations from the Porcupine Abyssal Plain, June 1979 - June 1980. *Fish. Res. Data Rep. Dir. Fish. Res. G.B.*, **3**, 97 pp.
- Meinke, J. 1986. Convection in the oceanic waters west of Britain. *The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh*, **88B**, 127-139.
- Meldrum, D.J., Booth, D. and Ritchie, D. 1983. ARGOS-traced drifters in the Rockall Trough.
- Mercier, H. and de Verdiere, A.C. 1985. Space and time scales of mesoscale motions in the eastern North Atlantic. *Journal of Physical Oceanography*, **15**, 2, 171-183.
- Merrett, N.R. 1980. A new species of the deep sea fish genus *Coelorinchus* Giorna (Macrouridae) from the eastern North Atlantic, with notes on its ecology. *Journal of Fish Biology*, **17**, 5, 553-564.
- Merrett, N.R. 1981. First record of a notacanth leptocephalus, a benthopelagic capture in the slope waters off Ireland. *Journal of Fish Biology*, **18**, 1, 53-57.

- Merrett, N.R., Badcock, J., Ehrich, S. and Hulley, P.A. 1986. Preliminary observations on the near bottom ichthyofauna of the Rockall Trough: A contemporaneous investigation using commercial sized midwater and demersal trawls to 100 m depth. The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh, **88B**, 312-314.
- Merrett, N.R., Gordon, J.D.M., Stehmann, M. and Haedrich, R.L. 1991. Deep demersal fish assemblage structure in the Porcupine Seabight (eastern North Atlantic): slope sampling by three different trawlers compared. Journal of the Marine Biology Association of the United Kingdom, **71**, 329-358.
- Merrett, N.R., Haedrich, R.L., Gordon, J.D.M., and Stehmann, M. 1991. Deep demersal fish assemblage structure in the Porcupine Seabight (eastern North Atlantic): Results of single warp trawling at lower slope to abyssal soundings. Journal of the Marine Biology Association of the United Kingdom, **71**, 2, 359-373.
- Mienert, J. and Chi, J. 1995. Astronomical time-scale for physical property records from Quaternary sediments of the northern North Atlantic. Oceanographic Literature Review, **42**, p.12.
- Millar, R.H. 1982. Ascidians from the Rockall Trough area of the Northeast Atlantic. Journal of Natural History, **16**, 2, 165-182.
- Milliman, J.D. 1980. Coccolithophorid production and sedimentation, Rockall Bank. Deep Sea Research, **27**, 11A, 959-963.
- Minchin, D. 1988. Observations on the southern distribution of the jellycat, *Anarhichas denticulatus* (Kroeyer). Journal of Fish biology, **32**, 1, 151-152.
- Minchin, D. 1989. The most northerly population of the deep water crawfish, *Palinurus mauritanicus* (Gruvel). Irish Naturalists Journal, **23**, 4, 142-145.
- Minchin, D., McGrath, D. and Duggan, C.B. 1995. The slipper limpet *Crepidula fornicata* (L.) in Irish waters with a review of its occurrence in the Northeast Atlantic. Journal of Conchology, London. **35**, 5, 297-301.
- Ministry of Defence. 1986. A bathymetric, magnetic and gravity survey of the Rockall Bank. The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh, **88B**, 301-302.
- Mitchell, L., Gage, J.D., Fallick, A.E. and Stewart, A., 1996. Benthic fluxes on the Hebridean Shelf edge. In: Bottrell, S.H. (ed) Proceedings of the 4<sup>th</sup> International Symposium on the Geochemistry of the Earth's Surface, Ilkely, July 1996, pp. 92-95. Published under the auspices of the International Association of Geochemistry and Cosmochemistry.
- Mitchell, L., Harvey, S.M., Gage, J.D. and Fallick A.E. Organic carbon dynamics in shelf edge sediments off the Hebrides. Internationale Review der gesamten Hydrobiologie, **82**, 425-435.
- Mohn, C. 1996. The circulation and hydrographic structure near the European shelf edge in the Porcupine Bank and Porcupine Seabight area.
- Mol, B. de, Keppens, E., Swennen, R. and Henriët, J.P. 1998. Isotopic characterisation of ahermatypic coral on a "Hovland" mound. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.99.
- Mol, B. de, Swennen, R. and Henriët, J.P. 1998. Sedimentology and geochemical characteristics of a core taken from a "Hovland" mound. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.47.
- Monahan, E.C. and Pybus, M.J. 1978. Colour, ultraviolet absorbance and salinity of the surface waters off the west coast of Ireland. Nature, **274**, 5673, 782-784.

- Monstad, T. 1987. Norwegian survey on blue whiting, spring 1987. Council Meeting of the International Council for the Exploration of the Sea (Santander, Spain, 1 Oct. 1987). Copenhagen, Denmark, ICES, 12 pp.
- Monstad, T. and Belikov, S.V. 1991. Report of a joint Norwegian Soviet acoustic survey on blue whiting, spring 1991. Council Meeting of the International Council for the Exploration of the Sea (La Rochelle, France, 26 Sept.-4 Oct. 1991). Copenhagen, Denmark ICES, 14 pp.
- Monstad, T., Belikow, S. V. and Coombs, S.H. 1994. Investigations on blue whiting in the area West of the British Isles, spring 1994. Council Meeting of the International Council for the Exploration of the Sea, St. John's (Canada), 22-30 Sept. 1994. Copenhagen Denmark ICES, 17 pp.
- Morozov, A.V. and Gainanov, V.G. 1998. Plume-shaped anomalies on the sub-bottom profiler records: what is their physical nature? Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.111.
- Morris, A.W. 1975. Dissolved molybdenum and vanadium in the Northeast Atlantic Ocean. Deep Sea Research and Oceanographic Abstracts, **22**, 1, 49-54.
- Muirhead, A., Tyler, P.A. and Thurstun, M.H. 1986. Reproductive biology and growth of the genus *Epizo anthus* (Zoanthidea) from the Northeast Atlantic. Journal of the Marine Biology Association of the United Kingdom, **66**, 1, 131-143.
- Murray, J.M. and Taplin, C.M. 1984. Larger agglutinated foraminifera from the Faeroe Channel and Rockall Trough collected by W.B. Carpenter. Journal of Micropaleontology, **3**, 59-62.
- Murray, J.W., Haddon, C.A., Powell, A.D.J. and Weston, J.F. 1984. Miocene to Recent bottom water masses of the Northeast Atlantic: an analysis of benthic foraminifera. In: Summerhayes, C.P. and Shackelton, N.J. (eds.), North Atlantic Palaeoceanography. Geological Society, London, Special Publication, **21**, 219-231.
- Myers, R.A. and Pepin, P. 1995. Recruitment variability and oceanographic stability. Oceanographic Literature Review, **42**, p.6.
- Newton, P.P., Lampitt, R.S., Jickells, T.D., King, P. and Boutle, C. 1994. Temporal and spatial variability of biogenic particle fluxes during the JGOFS northeast Atlantic processes studies at 47N, 20W. Deep Sea Research, **41**, 1617-1642.
- Nixon, E. 1989. Organochlorine levels in seals from the Irish Coast. Thesis, Trinity College, Dublin.
- Nixon, E. 1991. PCBs in marine mammals from Irish coastal waters. Irish Chemical News, Vol. 7, No. 3. Journal of the Institute of Chemistry of Ireland.
- Nixon, E. 1992. Marine environmental monitoring 1990/91. Proceedings of the R.V. Lough Beltra Workshop, Dalkey, Jan. 1992. Department of the Marine, Dublin.
- Nixon, E., McLaughlin, D., Boelens, R.G. and O'Sullivan, G. 1991. Contaminants in marine biota 1990 monitoring programme. Fisheries Leaflet 151, Department of the Marine, Dublin.
- Nixon, E., Rowe, A. and McLaughlin, D. 1993. Mercury concentrations from fish in Irish waters in 1992. Fishery Leaflet 156. Department of the Marine, Dublin.
- Nixon, E., Rowe, A. and McLaughlin, D. 1994. Mercury concentrations from fish in Irish waters in 1993. Fisheries Leaflet 162. Department of the Marine, Dublin.
- Nixon, E., Rowe, A. and McLaughlin, D. 1995. Mercury concentrations from fish in Irish waters in 1994. Fishery Leaflet 167. Department of the Marine, Dublin.

- Nixon, E., Rowe, A., Smyth, M., McLaughlin, D. and Silk, J. 1994. Monitoring of shellfish growing areas - 1993. Fisheries Leaflet 160. Department of the Marine, Dublin.
- Norris, S. 1986. Current meter observations near the Porcupine Bank 1981-1983. ODP Shipboard Scientific Party. 1996. Exploring the volcanic-rifted margins of the North Atlantic. Eos, Transactions, American Geophysical Union, **77**, 165-168.
- Norris, S. and MacDougall, N. 1986. Current meter observations near the Porcupine Bank 1981-1983. Fisheries Research Data Report, Directory of Fisheries Research Great Britain, **8**, 103 pp.
- Northridge, S.P., Tasker, M.L., Webb, A. and Williams, J.M. 1995. Distribution and relative abundance of harbour porpoises (*Phocoena phocoena* L.), white-beaked dolphins (*Lagenorhynchus albirostris* Gray), and minke whales (*Balaenoptera acutorostrata* Lacepede) around the British Isles. ICES Journal of Marine Science, **52**, 55-66.
- Nowell, A.R.M., Hollister, C.D. and Jumars, P.A. 1982. High Energy Benthic Boundary Layer Experiment: HEBBLE. EOS, **63**, 594-595.
- Oakey, N.S. 1985. Statistics of mixing parameters in the upper ocean during JASIN Phase 2. Journal of Physical Oceanography, **15**, 12, 1662-1675.
- O'Connor, B. 1981. Some echinoderms from the west coast new to the Irish Fauna. Irish Naturalists Journal, **20**, 247-249.
- O'Connor, B. 1985. Deep-water Glyceridae of the Northeast Atlantic. In: Laubier, L. and Monniot, C. (eds.), Peuplements profonds du golfe de Gascogne, Campagne Biogas, 351-354. IFREMER, Brest.
- O'Connor, B. 1987. The Glyceridae (Polychaeta) of the Northeast Atlantic with descriptions of two new species. Journal of Natural History, **21**, 167-189.
- O'Connor, B. 1987. A redescription of *Anaitides rosea* (McIntosh, 1877) (Polychaeta: Phyllodocidae), with notes on nomenclature, ecology and distribution and a key to the genera of Phyllodocinae from the NE Atlantic. Irish Naturalists Journal, **22**, 310-314.
- O'Connor, B. and Shin, P.K.S. 1983. *Hesiospina similis* (Hessle) (Polychaeta: Hesionidae) from the west coast of Ireland with notes on its taxonomy and geographic distribution. Cah. Mar. Biol., **27**, 61-69.
- O'Connor, B., McGrath, D. and Keegan, B.F.K. 1986. Demographic equilibrium - the case of an *Amphiura filiformis* community on the west coast of Ireland. Hydrobiologia, **142**, 151-158.
- O'Leary, E. 1996. Preliminary results of sediment flux studies across the shelf break, Central Rockall Trough. ENAM II. [www.ucc.ie/ucc/research/crc/enam2.htm](http://www.ucc.ie/ucc/research/crc/enam2.htm), 4pp.
- Olsen, H.E. 1995. Norwegian experience of deep water fishing with longlines. In: Hopper, A.G. (ed.), Deep Water Fisheries of the North Atlantic Oceanic Slope. Dordrecht, The Netherlands, Kluwer Academic Publishers, 367-373.
- Osborne, L., Hughes, M., Callow, M., Hydes, D. and LeGall 1997. OMEX hydrographic and nutrient atlas. CD Rom by SOC and PML. Goban Spur area. [Www.npm.ac.uk/rsdas/omex/atlas/index.html](http://www.npm.ac.uk/rsdas/omex/atlas/index.html), 3pp.
- O'Sullivan, M.P., Nixon, E., McLaughlin, D., O'Sullivan, M. and O'Sullivan, D. 1991. Chemical contaminants in estuarine and coastal waters, 1978 to 1988. Fishery Bulletin **10**, Department of the Marine.
- Otto, L. and Van Aken, H.M. 1996. Surface Circulation in the northeast Atlantic as observed with drifters. Deep Sea Research, Part I: Oceanographic Research Papers, Part II: Topical Studies in Oceanography, **43**, p.4.

- Pain, S.L., Tyler, P.A. and Gage, J.D. 1982. The reproductive biology of *Hymenaster membranaceus* from the Rockall Trough, North East Atlantic Ocean, with notes on *H. gennaeus*. *Marine Biology*, **70**, 1, 41-50.
- Pain, S.L., Tyler, P.A. and Gage, J.D. 1982. The reproductive biology of the deep sea asteroids *Benthopecten simplex* (Perrier), *Pectinaster filholi* (Perrier), and *Pontaster tenuispinus* (Dueben & Koren) (Phanerozoia: Benthopectinidae) from the Rockall Trough. *J. Exp. Mar. Biol. Ecol.*, **65**, 2, 195-211.
- Panteleyev, N.A., Moiseyev, G.A. and Kiseleva, O.A. 1983. Time variability of the thermal fine structure in the upper layer of the ocean. *Oceanol. Acad. Sci., USSR*, **23**, 1, 47-51.
- Pascoe, P.L. 1987. Monogenean parasites of deep-sea fishes from the Rockall Trough (N.E. Atlantic) including a new species. *Journal of the Marine Biology Association of the United Kingdom*, **67**, 3, 603-622.
- Pastouret, L., Vanney, J.R., Auffret, G.A., Auzende, J.M., Beuzart, P., Ferry, S., Pascal, A., Rad, U. von, *et al.* 1984. In: Leclaire, L. (ed.), *Morphology of the Bay of Biscay northern margin, observations from submersible CYANA*. Les Archives De L' Ocean. Society Geologique de France, Paris, France, **26**, 1, 81-92.
- Patching, J.W. and Eardley, D. 1997. Bacterial biomass and activity in the deep waters of the E. Atlantic - evidence for a barophilic community. *Deep Sea Research, I*, **44**, 9-10, 1655-1670.
- Patching, J.W., Raine, R.C.T. and Barnett, P.R.O. 1986. An investigation into the causes of small scale variation in sediment community oxygen consumption in the Rockall Trough. *Proceedings of the Royal Society of Edinburgh*, **88B**, 281-290.
- Patching, J.W., Raine, R.C.T., Barnett, P.R.O. and Watson, J. 1986. Abyssal benthic oxygen consumption in the Northeastern Atlantic: measurements using the suspended core technique. *Oceanologica Acta*, **9**, 1-7.
- Paterson, G.I.J. 1986. Aspects of the zoogeography of some benthic animals in the Rockall Trough. The Oceanography of the Rockall Channel. *Proceedings of the Royal Society of Edinburgh*, **88B**, 316-318.
- Paterson, G.L.J. and Lamshead, P.J.D. 1995. Bathymetric patterns of polychaete diversity in the Rockall Trough, Northeast Atlantic. *Deep Sea Research*, **42**, 1199-1214.
- Paterson, G.L.J., Tyler, P.A. and Gage, J.D. 1982. The taxonomy and zoogeography of the genus *Ophiecten* (Echinodermata: Ophiuroidea) in the North Atlantic Ocean. *Bulletin of the British Museum of Natural History, Zoology*, **43**, 3, 109-128.
- Paterson, G.L.J., Gage, J.D., Lamont, P.L., Bett, B.J. and Thurston, M.H. 1994. Patterns of abundance and diversity from the abyss polychaetes from northeastern Atlantic abyssal plains. In: Dauvin, J. C., Laubier, L., Reish, D.J. (eds.), *Proceedings of the 4th International Polychaete Conference, 27 July -1 August 1992, Angers, France*. Paris, France Editions du Museum National D' Histoire Naturelle, **162**, 503-511.
- Paterson, G.L.J., Thurston, M.H., Gage, J.D., Lamont, P.L. and Bett, B.J. 1994. Patterns of polychaete assemblage structure from the abyss: some preliminary observations from the NE Atlantic abyssal plains. *Polychaete Research*, **16**, 16-19.
- Pautot, G., Renard, V., Auffret, G., Pastouret, L. and De Charpal, O. 1976. A granite cliff deep in the North Atlantic. *Nature*, **263**, 669-672.
- Pearson, M. and Gage, J.D. 1984. Diets of some deep sea brittle stars in the Rockall Trough. *Marine Biology*, **82**, 3, 247-258.

- Pfannkuche, O. 1985. The deep sea meiofauna of the Porcupine Seabight and abyssal plain (NE Atlantic): Population, structure, distribution, standing stocks. *Oceanologica Acta*, **8**, 3, 343-353.
- Pfannkuche, O. 1993. Benthic response to the sedimentation of particulate organic matter at the BIOTRANS station, 47N, 20W. *Deep-Sea Research*, **40**, 135-149.
- Pearce, G. 1983(?). PhD on meiobenthos of two sites west of Ireland and in SW Porcupine Seabight (1973-1983). University of Aberystwyth, Wales.
- Phillips Petroleum Co. (UK) Ltd 1994(?). Current, wave and wind data from Porcupine Bank (Aug. 1976 - Oct. 1977). Available from Phillips.
- Pierce, G.J., Boyle, P.R., Hastie, L.C. and Shanks, A.M. 1994. Distribution and abundance of the fished populations of *Loligo forbesi* in UK waters: analysis of fishery data. *Fisheries Research*, **21**, 193-216.
- Pillen, S., Vanneste, M. and Hentriet, J.-P. 1998. Celtic ring reefs: a genetic hypothesis. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.43.
- Pingree, R.D. 1997. EAST - Exchange and slope treatment of water along the eastern slope boundary of the Rockall Trough. PhD, 1994-1997, Univ. of Plymouth, UK, [www.experts.org.uk/projects/p00199.htm](http://www.experts.org.uk/projects/p00199.htm), 1pp.
- Pingree, R.D. and Griffiths, D.K. 1978. Tidal fronts on the shelf seas around the British Isles. *Journal of Geophysical Research*, **83**, 4615-4622.
- Pingree, R.D. and Griffiths, D.K. 1984. Trapped diurnal waves on Porcupine and Rockall Banks. *Journal of the Marine Biology Association of the United Kingdom*, **64**, 4, 889-897.
- Pingree, R.D., Holligan, P.M. and Mardell, G.T. 1978. The effects of vertical stability on phytoplankton distribution in the summer on the northwest European Shelf. *Deep Sea Research*, **25**, 1011-1028.
- Pollack, L.W. and Tedde, P.G. 1951. On the frequency of cyclones over the North Atlantic related to the sunspot cycle. *Arch. F. Met., Geophysik u. Bioklim., Wien, Serie A, Band IV*, 98-111.
- Pollard, R.T. 1983. Mesoscale (50-100 km) circulations revealed by inverse and classical analysis of the JASIN hydrographic data. *Journal of Physical Oceanography*, **13**, 3, 377-394.
- Pollard, R.T. and Collins, D.S. 1980. 500-600m currents during JASIN 1978. *JASIN News*, **16**.
- Pollard, R.T., Guymer, T.H. and Taylor, P.K. 1985. Summary of the JASIN 1978 field experiment.
- Pollard, R.T., Griffiths, M.J. and Cunningham, S.A. 1997. Vivaldi 1991 - a study of the formation, circulation and ventilation of eastern North Atlantic Central Water, **44**, p.5.
- Pollock, C.M. 1994. Observations on the distribution of seabirds off south-west Ireland. *Irish Birds*, **5**, 173-182.
- Pollock, C., Reid, J., Webb, A. and Tasker, M. 1997. The distribution of seabirds and cetaceans in the waters around Ireland. *JNCC Report*, **267**, 167pp.
- Poremba, K., Eardley, D. and Patching, J.W. 1994. Dynamics of microbial abundance and activity in deep-sea sediment of the NE Atlantic. *European Microbiology*, **2**, 22-25.
- Post, A. 1988. Contribution to the knowledge of the fish fauna in waters West of the British Islands. (76th research cruise of FRV "Walther Herwig"). *Arch. Fischereiwiss.*, **39**, 1, 31-69.

- Priede, I.G., Bagley, P.M., Smith, A., Creasey, S. and Merrett, N.R. 1994. Scavenging deep demersal fishes of the Porcupine Seabight, Northeast Atlantic: Observations by baited camera, trap and trawl. *Journal of the Marine Biology Association of the United Kingdom*, **74**, 3, 481-498.
- Priede, I.G., Raid, T. and Watson, J.J. 1996. Deep-water spawning of Atlantic mackerel *Scomber scombrus*, west of Ireland. *Journal of the Marine Biology Association of the United Kingdom*, **75**, 4, 849-855.
- Pugh, P.R. *et al.* 1995. RRS "Charles Darwin" Cruise 85, 11 Apr 07 May 1994. Pelagic ecology of the Goban Spur shelf break. Cruise Report, Institute of Oceanographic Science, Deacon Laboratory, **245**, 65 pp.
- Quigley, D.T.G., Flannery, K. and O' Shea, J. 1989. Specimens of the Greenland halibut *Reinhardtius hippoglossoides* (Walbaum 1792) from Irish waters. *Irish Naturalists Journal*, **23**, 3, 111-112.
- Raetz, H.J. 1984. Qualitative and quantitative investigations of ichthyococenosis in the archibenthic zone of the Rockall Trough and neighboured ridges (West British waters). *Mitt. Inst. Seefisch. Bundesforschungsanst. Fisch., Hamb.*, **34**, 152 pp.
- Raine, R. and Joyce, B. 1996. The summer phytoplankton ecology of waters off southwestern Ireland. In: Keegan, B.F. and O' Connor, R. (eds.), *Irish Marine Science*, 1995, 131-142.
- Raine, R. and McMahon, T. 1998 In Press. Physical dynamics on the continental shelf off southwestern Ireland and their influence on coastal phytoplankton blooms. *Continental Shelf Research*.
- Raine, R., Joyce, B., Patching, J.W., McMahon, T. and Roden, C. 1993. Upwelling and phytoplankton ecology of southwest Irish coastal waters. *ICES Report, L*, p.18.
- Raine, R., McMahon, T., O'Mahony, J. and Roden, C.M. 1989. Phytoplankton production around the coast of Ireland. In: O' Sullivan (ed.), *Proceedings of the 4<sup>th</sup> Lough Beltra Workshop*. Dublin, Department of Marine, 56-72.
- Raine, R., McMahon, T. and Roden, C.M. 1993. A review of the summer phytoplankton distribution in Irish coastal waters: A biogeography related to physical oceanography. In: Costelloe, M.J. and Kells, K.S. (eds.), *Biogeography of Ireland: Past, Present and Future*. Occasional publication of the Irish Biogeographical Society, Trinity College, Dublin.
- Raine, R., O'Mahony, J., McMahon, T. and Roden, C. 1990. Hydrography and phytoplankton of waters off south-west Ireland. *Estuarine, Coastal and Shelf Science*, **30**, 579-592.
- Ratz, H.J. 1984. Qualitative und quantitative Untersuchungen der Ichthyozönose in der archibenthischen Zone des Rockall-Grabens und umlegender Banke. *Mitteilungen aus dem Institut für Seefischerei der Bundesforschungsanstalt für Fischerei* **34**, Hamburg.
- Read, J.F. 1991. CTD data from the Northeast Atlantic, April 1989, collected on RRS "Discovery" Cruise 181.
- Rees, A.I., Brown, C.M., Hailwood, E.A. and Riddy, P.J. 1982. Magnetic fabric of bioturbated sediment from the northern Rockall Trough: Comparison with modern currents. *Marine Geology*, **46**, 1-2, 161-173.
- Reid, P.C., Robinson, G.A. and Hunt, H.G. 1987. Spatial and temporal patterns of marine blooms in the northeastern Atlantic and North Sea from the Continuous Plankton Recorder survey. *Rapp. P.-v. Reun. Cons. Int. Explor. Mer*, **187**, 27-37.
- Reidenaar, J.A. and Thistle, D., 1985. The tanaid fauna from a region of the deep North Atlantic where near-bottom current velocities are high. *Oceanologica Acta*, **8**, 355-360.

Reinert, J. 1995. Deep water resources in Faeroes waters to the south, southwest and west of the Faeroes - a preliminary account. In Hopper, A.G. (Ed.), Deep-water fisheries of the North Atlantic ocean slope, 201-225. Amsterdam: Kluwer Academic Publishers.

Reinsch, H.H. 1981. On the Blue Ling, *Molva dypterygia*. Inf. Fischwirtsch., **28**, 4, 123-127.

Reinsch, H.H. 1982. German fisheries on blue ling (*Molva dypterygia*) in 1981. Inf. Fischwirtsch., **29**, 2, 51-53.

Reinsch, H.H. 1983. Germany's blue ling fishery in the Northeast Atlantic in 1982. Inf. Fischwirtsch. **30**, 3, 127-131.

Reinsch, H.H. 1984. Germany's blue ling fishery in 1983. Inf. Fischwirtsch. **31**, 2, 65-67.

Reinsch, H.H. 1989. The German fishery on blue ling in 1988 in the Northeast Atlantic. Inf. Fischwirtsch., **36**, 2, 56-58.

Rex, M.A. 1997. Large scale patterns of species diversity in the deep-sea benthos hydrodynamics. In: Ormond, R.F.G., Gage, J.D. and Angel, M.V. (eds) Marine Biodiversity. Cambridge University Press, pp. 94-121.

Rice, A.L. 1977. RRS "Challenger" Cruise 88, 23 October - 16 November 1977. Geochemical studies off the Iberian Peninsular and biological sampling in the Porcupine Seabight area. Cruise Report of the Institute of Oceanographic Science, Wormley, **65**, 23 pp.

Rice, A.L. 1980. RRS "Challenger" Cruise 9/79, 29 June - 11 July 1979. Benthic and mid-water biology of the Porcupine Seabight and the Rockall Trough. Cruise Report of the Institute of Oceanographic Science, Wormley, **89**, 24 pp & figs.

Rice, A.L. 1980. RRS "Challenger" Cruise 17/80 (IOS Cruise 509) 4 November 1980 - 16 November 1980. Benthic Biology of the Porcupine Sea Bight. Cruise Report of the Institute of Oceanographic Science, Wormley, **107**, 19 pp.

Rice, A.L. 1981. RRS "Challenger" Cruise 8/81 (IOS Cruise 511). 18 May - 1 June 1981. Benthic Biology of the Porcupine Sea Bight. Cruise Report of the Institute of Oceanographic Science, Wormley, **119**, 20 pp.

Rice, A.L. 1982. RRS "Challenger" Cruise 14/81 (I.O.S. Cruise 512). 14 September 1981 - October 1981. Benthic biology and physiology in the Porcupine Sea Bight. Cruise Report of the Institute of Oceanographic Science, Wormley, **135**, 20 pp.

Rice, A.L. 1984. RRS "Challenger" Cruise 6/83 (IOS Cruise 517): 7 April - 8 May 1983. Benthic and mid-water biology of the Porcupine Seabight. Cruise Report of the Institute of Oceanographic Sciences, Wormley, **159**, 27 pp.

Rice, A.L. 1984. RRS "Challenger" Cruise 5/84 (IOS Cruise 520): 11-28 August 1984. Benthic biology of the Porcupine Seabight. Cruise Report of the Institute of Oceanographic Sciences, Wormley, **175**, 33 pp.

Rice, A.L. 1987. RRS "Discovery" Cruise 158, 12 April -12 May 1986. An investigation of phytodetrital sedimentation in the Porcupine Seabight. Cruise Report of the Institute of Oceanographic Sciences, Wormley, **189**, 58 pp.

Rice, A.L. 1990. The nomenclature of crabs collected during the cruises of HMS "Porcupine" in 1869 and 1870, with notes on the Norman Collection of invertebrata and its acquisition by the British Museum (Natural History). Bulletin of the British Museum, Natural History (Hist. Ser.), **18**, 1, 1-23.



- Rice, A.L. 1992. RRS "Challenger" Cruise 79, 12 May - 3 June 1991. Benthic biology at the European community Station (48°50'N, 16°30'W) and in the Porcupine Seabight. Cruise Report of the Institute of Oceanographic Sciences, **231**, 52 pp (restricted distribution).
- Rice, A.L. and Hartnoll, R.G. 1983. Aspects of the biology of the deep sea spider crab, *Dorhynchus thomsoni* (Crustacea: Brachyura). Journal of Zoology, **201**, 3, 417-431.
- Rice, A.L., Billett, D.S.M., *et al.* 1986. Seasonal deposition of phytodetritus to the deep sea floor. The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh, **88B**, 265-279.
- Rice, A.L. and Thurston, M.H. 1988. Dense aggregations of a hexactinellid sponge in the Porcupine Seabight. In: Fifth Deep-Sea Biology Symposium, Brest 26 June - 1 July 1988: Programme and Abstracts, Brest: IFREMER, p.65. Paper published in Progress in Oceanography, **24**, 1-4, 179-196, (1990).
- Rice, A.L., *et al.* 1990. RRS "Discovery" Cruise 185. 18 Aug. - 17 Sept. 1989. Abyssal benthic biology at the European Community Station (48°50'N 16°30'W). Cruise Report of the Institute of Oceanographic Science, Deacon Laboratory, **217**, 51 pp.
- Rice, A.L., Thurston, M.H., and New, A.L. 1990. Dense aggregations of a hexactinellid sponge, *Pheronema carpeni*, in the Porcupine Seabight (Northeast Atlantic Ocean) and possible causes. Programs in Oceanography, **24**, 1-4, 179-196.
- Rice, A.L., Thurston, M.H. and Bett, B.J. 1994. The IOSDL DEEPSEAS programme: Introduction and photographic evidence for the presence and absence of a seasonal input of phytodetritus at contrasting abyssal sites in the northeastern Atlantic. Deep Sea Research, A Oceanography Research Paper, **41**, 9, 1305-1320.
- Rice, A.L., Billett, D.S.M., Thurston, M.H. and Lampitt, R.S. 1991. The Institute of Oceanographic Sciences Biology Programme in the Porcupine Seabight: Background and General Introduction. Journal of the Marine Biology Association of the United Kingdom, **71**, 281-310.
- Rice, A.L., Tyler, P.A. and Paterson, G.J.L. 1992. The pennatulid *Kophobelemnion stelliferum* (Cnidaria: Octocorallia) in the Porcupine Seabight (North East Atlantic Ocean). Journal of the Marine Biology Association of the United Kingdom, **72**, 2, 417-434.
- Richards, J. 1979. Blue whiting. Scottish Fisheries Bulletin, **44**, 25-29.
- Richards, P.C., Ritchie, J.D. and Thomson, A.R. 1987. Evolution of deep-water climbing dunes in the Rockall Trough- Implications for overflow currents across the Wyville -Thomson Ridge in the (?)Late Miocene. Marine Geology, **76**, 177-183.
- Riemann, F. 1989. Gelatinous phytoplankton detritus aggregates on the Atlantic deep sea bed. Structure and mode of formation. Marine Biology, **100**, 4, 533-539.
- Riemann-Zurneck, K. 1997. A hemisessile sea anemone from the Porcupine Abyssal Plain, North Atlantic Ocean: *Iosactis vagabunda* gen., nov., sp. Nov. Journal of the Marine Biology Association of the United Kingdom, **77**, 4, 1011-1025.
- Roberts, D.G. 1972. Slumping on the eastern margin of Rockall Bank, North Atlantic Ocean. Marine Geology, **13**, 225-237.
- Roberts, D.G. 1974. RRS "Discovery" Cruise 60, 26 February-22 March 1974. Seismic reflection profiling on the Rockall Plateau and in the South Western Approaches.
- Roberts, D.G. 1975. Sediment distribution on the Rockall Bank, Rockall Plateau. Marine Geology, **19**, 239-257.

- Roberts, D.G. 1978. A bathymetric, magnetic and gravity survey of the Rockall Bank, HMS "Hecla" 1969.
- Roberts, D.G. and Eden, R.A. 1974. DE "Vickers Voyager" and "Pisces III" June-July 1973. Submersible investigations of the geology and benthos of the Rockall Bank. Institute of Oceanographic Sciences, Cruise Report, **1**, 22 pp & figs.
- Roberts, D.G. and Jones, M.T. 1978. A bathymetric, magnetic, and gravity survey of the Rockall Bank by HMS Hecla 1969, Admiralty Marine Science Publication, **19**, Hydrographic Office, Taunton.
- Roberts, D.G. and Kidd, R. B., 1979. Abyssal sediment wave fields on Feni Ridge, Rockall Trough: long-range sonar studies. *Marine Geology*, **33**, 175-191.
- Roberts, D.G., Hogg, N.G., Bishop, D.G. and Flewelling, C.G. 1974. Sediment distribution around moated seamounts in the Rockall Trough. *Deep Sea Research*, **21**, 3, 175-184.
- Robinson, A.R. *et al.*, 1993. Mesoscale and upper ocean variabilities during the 1989 JGOFS bloom study. *Deep Sea Research*, **40**, 9-35
- Robinson, S.G. and McCave, I.N. 1994. Orbital Forcing of bottom-current enhanced pelagic sedimentation on Feni Drift, NE Atlantic, during the mid-Pleistocene. *Palaeoceanography*, **9**, 943-972.
- Roe, H.S., 1986. Bathypelagic calanoid copepods from midwater trawls in the NE Atlantic. In: *Proceedings 2<sup>nd</sup> International Conference on Copepoda*, Scheiver, G., Schiminke, H.K. and Shih, C-T.(eds), Ottawa, Canada.
- Roe, H.S.J., *et al.* 1987. RRS "Challenger" Cruise 8/86: 25 November 18 December 1986. Stations 52401 52405. Biological studies on the Porcupine Abyssal Plain 48°50'N, 16°30'W and in the Porcupine Seabight 52°00'N, 13°44'W. Cruise Report of the Institute of Oceanographic Sciences, Deacon Laboratory, Wormley U.K., **196**, 28 pp.
- Roed, L.P., Hackett, B. and Irmann-Jacobsen, T.B. 1991. Simulations of upper layer current and density variations in the Northeast Atlantic. *Marine Technology Society et al. Conference Meeting '91*, New Orleans, 11/10-14/91, *Proceedings*, **1**, 299-305.
- Rogan, E., Berrow, S.D., Gassner, I. and MacKey, M. In Press. A review of striped dolphin, *Stenella coeruleoalba* in Irish waters. *Proceedings of the 49<sup>th</sup> Meeting of the International Whaling Commission*, Bournemouth, October 1997.
- Rowe, A., Nixon, E., Smyth, M., McManus, M and McGovern, E. 1998 In Press. Heavy metal and organochlorine concentrations in fin-fish from Irish waters in 1995. *Marine Institute Fisheries Leaflet*.
- Rubenstein, D.M. 1984. Upper ocean shear during JASIN: A deterministic and statistical analysis. Mclean, VA USA SAI, 87 pp.
- Rusby, J.S.M., Sinha, M.C., *et al.* 1987. RRS "Discovery" Cruise 170, 4-23 September 1987. Instrument trials. Cruise Report of the Institute of Oceanographic Sciences, Deacon Laboratory, **199**, 23 pp.
- Santos, V., Billett, D.S.M., Rice, A.L. and Wolff, G.A. 1994. Organic matter in deep-sea sediments from the Porcupine Abyssal Plain - Lipids. *Deep Sea Research*, **41**, 787-819.
- Saoutkine, A. 1998. Influence of surface-water temperature oscillations on the development of deepwater coral build-ups in the Porcupine Seabight (North Atlantic). *Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs"*, Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.45.

Saprykina, A.U., Egorov, A. and Stadnitskaya, A.N. 1998. Distribution and composition of organic matter in sediments from carbonate mounds of the Porcupine Seabight. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.53.

Sargent, J.R., Gatten, R.R. and Merrett, N.R. 1983. Lipid of *Hoplostethus atlanticus* and *H. mediterraneus* (Beryciformes: Trachichthyidae) from deep water to the west of Britain. Marine Biology, 74, 3, 281-286.

Sarnthein, M. and Maslin, M. 1995. The rapid and excessive cooling of Europe during the LGM: a result of iceberg flotillas and unique surface circulation west of Ireland? In: Global change and marine geology, 85. Terra Nostra (Bonn), 1, 95, pp 39.

Sarnthein, M. 1998. Global climatic linkages over the last 60KY - bidecadal to centennial sediment records from the North Atlantic and South China Sea vs. ice records from Greenland. Abstract, Geoscience 1998, 14-18 April 1998, Keele University.

Savoye, B. 1997. PASISAR results from SEDIFAN 2 cruise. Abstract, Second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.

Schnitker, D. 1984. North-East Atlantic Neogene benthic foraminiferal faunas: tracers of deep water palaeoceanography. In: Summerhayes, C.P. and Shackleton, N.J. (Eds.), North Atlantic Palaeoceanography. Geological Society, London, Special Publication 21.

Schoene, R. 1980. Distribution and possible catchability of blue whiting in the sea area between Faroe Is. and south-west Ireland from January to March 1980. Inf. Fischwirtsch., 27, 3, 94-98.

Schoene, R. 1983. Fishery biological investigations between Faeroe Isles and northern Biscay Bay. (57. Cruise of FRV Walther Herwig from 24/2/1983 to 30/3/1983). Inf. Fischwirtsch., 30, 2, 63-68.

Scoffin, T.P., Alexandersson, E.T., Bowes, G.E., Clokie, J.J., Farrow, G.E. and Milliman, J.D. 1980. Recent, temperate, sub photic, carbonate sedimentation: Rockall Bank, Northeast Atlantic. Journal of Sedimentary Petrology, 50, 2, 331-336.

Scottish Marine Biological Association. 1981. Cruise Report: RRS "Challenger" Cruise 10/81. 4-14 July 1981. (Locality: Minches, Scottish Continental Shelf and Rockall Channel). Cruise Report, Scottish Marine Biological Association, Oban U.K., 10, 12 pp.

Scottish Marine Biological Association. 1981. Cruise Report: RRS "Challenger" Cruise 12/81. 14-21 August 1981. (Locality: Rockall Trough). Cruise Report, Scottish Marine Biological Association, Oban U.K., 12/81, 8 pp.

Scottish Marine Biological Association. 1981. Cruise Report: RRS "Challenger" Cruise 15/81. 6-20 October 1981 (Locality: Rockall Trough and its Continental Shelf between 51°N and 58°N.). Cruise Report, Scottish Marine Biological Association, Oban U.K., 15/81, 18 pp.

Scottish Marine Biological Association. 1982. Cruise Report: RRS "Challenger" Cruise 2/82, 26 January - 9 February 1982. (Locality: Rockall Channel, 56°N to 58°N, and the Scottish Continental Shelf.). Cruise Report, Scottish Marine Biological Association, Oban U.K., 2/82, 9 pp.

Scottish Marine Biological Association. 1982. Cruise report: RRS "Challenger" Cruise 7/82, 26 April - 16 May 1982. (Locality: Scottish continental shelf and Rockall Channel.). Cruise Report, Scottish Marine Biological Association, Oban U.K., 7/82, 13 pp.

Scottish Marine Biological Association. 1982. Cruise report: RRS "Challenger" Cruise 11/82, 29 July -12 August 1982. (Locality: Irish Shelf, Rockall Trough, Hebridean Continental Slope, Wyville Thomson

Ridge, Faroe Bank Channel). Cruise Report, Scottish Marine Biological Association, Oban U.K., **11/82**, 23 pp.

Scottish Marine Biological Association. 1982. Cruise report: RRS "Challenger" Cruise 15/1982, 16-30 October 1982. (Locality: Scottish continental slope and shelf, Rockall Channel, 56°N - 59°N). Cruise Report, Scottish Marine Biological Association, Oban U.K., **15/82**, 8 pp.

Scottish Marine Biological Association. 1983. Cruise report: RRS "Challenger" Cruise 3/83, 8-22 February 1983. (Locality: Scottish continental slope and shelf, Rockall.). Cruise Report, Scottish Marine Biological Association, Oban U.K., 10 pp.

Scottish Marine Biological Association. 1983. Cruise report: RRS "Challenger" Cruise 7/83, 11 May - 2 June 1983. (Locality: Rockall Channel, 52°N - 60°N, Scottish continental slope and shelf.). Cruise Report, Scottish Marine Biological Association, Oban U.K., **7/83**, 10 pp.

Scottish Marine Biological Association. 1983. Cruise report: RRS "Challenger" Cruise 11/83, 10-24 August 1983. (Locality: Scottish continental shelf and slope, Rockall Channel 55°N - 59°N.). Cruise Report, Scottish Marine Biological Association, Oban U.K., **11/83**, 11 pp.

Scottish Marine Biological Association. 1988. Cruise report: RRS "Challenger" Cruise 25/88, 24 February - 7 March 1988. (Locality: Scottish continental shelf, Wyville-Thomson Ridge and Rockall Trough). Cruise Report, Scottish Marine Biological Association, Oban U.K., **25/88**, 12 pp.

Shackleton, N.J., Backman, J., *et al.*, 1984. Oxygen isotope calibration of the onset of ice rafting and history of glaciation in the North Atlantic region. *Nature*, **307**, 5952, 620-623.

Shearman, E.D.R. 1980. Remote sensing of the sea surface by dekametric radar. *Radio Electron. Eng.*, 5011-12, 611-623.

Shell U.K. Exploration and Production. 1997. Rockall Trough Blocks Environmental Appraisal, 45 pp.

Shelton, G.A.B. 1980. *Lophelia pertusa* (L.): electrical conduction and behaviour in a deep water coral. *Journal of the Marine Biology Association of the United Kingdom*, **60**, 2, 517-528.

Shevchenko, A.V., Isaev, N.A. and Belikov, S.V. 1989. Some results of ichthyoplankton and hydrographic investigations to the west and northwest of the British Isles in 1983-1987. In: Blaxter, J.H.S., Gamble, J.C. and Westernhagen, H. von (eds.), *The early life history of fish. The Third ICES Symposium*, Bergen, 3-5 October 1988, **191**, p.455.

Shimmiel, G.B., Brand, T.D. and Ritchie, G.D., 1995. The benthic geochemical record of late Holocene carbon flux in the northeast Atlantic. *Phil. Trans. R. Soc. London*, **348**, 221-227.

Sibuet, M., Calmet, D. and Auffret, G. 1985. Reconnaissance photographique de conteneurs en place dans la zone d'immersion des déchets faiblement radioactifs de l'Atlantique Nord-Est. *Comptes Rendus de l'Academie des Sciences, Paris*, **301**, 497-502.

Sibuet, M., Lambert, C.E., Chesselet, R. and Laubier, L. 1989. Density of the major size groups of benthic fauna and trophic input in deep basins of the Atlantic Ocean. *Journal of Marine Research*, **47**, 4, 851-867.

Sigurjónsson, J. 1995. On the life history and autecology of north Atlantic rorquals. In: Blix, A.S., Walloe, L. and Øyvind, U. (eds.), *Whales, seals, fish and man. Proceedings of the international symposium on the biology of marine mammals in the north east Atlantic*, Tromsø, Norway, 29 November - 1 December 1994. Amsterdam, Elsevier (*Developments in Marine Biology*, **4**), 129-132.

Sikes, E.L. and Keigwin, L.D. 1997. A re-examination of northeast Atlantic sea surface temperature and salinity over the last 16 kyr. *Oceanographic Literature Review*, **44**, p.2.

Skov, H., Durinck, J., Danielsen, F. and Bloch, D. 1991. Patterns of co-occurrence of cetaceans and seabirds in the north east Atlantic. ICES C.M. N:21.

Smith, A., Matthiopoulos, J. and Priede, I.G. 1997. Areal coverage of the ocean floor by the deep-sea elasipodid holothurian *Oneirohanta mutabilis*: estimates using systematic, random and directional search strategy simulations. Oceanographic Literature Review, **44**, 8.

Stehmann, M. 1993. New records of an adult couple of *Malacoraja krefftii* (Stehmann 1977) from the Rockall Trough area, eastern North Atlantic (Pisces, Rajiformes, Rajidae). Archiv fur Fischereiwissenschaft, **41**, 3, 169-186.

Stock, J.H. 1984. Deep water Pycnogonida of the INCAL, BIOGAS, GEOMANCHE and SAFARI cruises. Journal of the Marine Biology Association of the United Kingdom, **64**, 4, 743-749.

Stoker, M.S. In Press. Sediment drift development on the continental margin off NW Britain. In: Stoker, M.S., Evans, D. and Cramp, A. (eds.), Geological processes on continental margins: sedimentation, mass-wasting and stability. Geological Society, London, Special Publication.

Stoker, M.S. and Long, D. 1986. A regional geological and geographical database for the northwest United Kingdom continental margin. The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh, **88B**, 299-300.

Stoker, M.S., Akhurst, M.C., Howe, J.A. and Stow, D.A.V. In Press. Sediment drifts and contourites on the continental margin off north-west Britain. Sedimentary Geology.

Stoker, M.S., Evans, D. and Cramp, A. In Press. Geological processes on continental margins: sedimentation, mass-wasting and stability. Geological Society, London, Special Publication.

Stone, C.J., Webb, A., Barton, C., Ratcliffe, N., Reed, T.C., Tasker, M.L., Camphuysen, C.J. and Pienkowski, M.W. 1995. An atlas of seabird distribution in north-west waters. Joint Nature Conservation Committee, Aberdeen.

Stone, C.J., Webb, A. and Tasker, M.L. 1995. The distribution of auks and Procellariiformes in north-west European waters in relation to depth of sea. Bird Study, **42**, 50-56.

Strachan, N.J.C. and Kell, L. 1995. A potential method for the differentiation between haddock fish stocks by computer vision using canonical discriminant analysis. Oceanographic Literature Review, **42**, p.11.

Strachan, P and Evans, D. 1991. A local deep-water sediment failure on the NW slope of the UK. Scottish Journal of Geology, Vol. 27, 107-111.

Suess, E. and Le Pichon, X., (eds) 1994. The Deep-Sea Floor as a Changing Environment. Report of the ECOPS Euroconference. Kiel: GEOMAR publication, 48pp.

Swallow, J. C. 1977. RRS "Discovery" Cruise 86, 7-30 September 1977. Meteorological and oceanographic observations in the Rockall Trough (JASIN 1977). Institute of Oceanographic Sciences, Cruise Report 57, 23 pp & figs.

Talbot, L.A., Paul, M.A. and Stoker, M.S. 1994. Geotechnical and acoustic characteristics of Plio-Pleistocene sediments from the Hebrides Slope. Geo-Marine Letters, Vol. **14**, 244-251.

Tasker, M.L., Webb, A., Harrison, N.M. and Pienkowski, M.W. 1990. Vulnerable concentrations of marine birds west of Britain. Peterborough, Nature Conservancy Council.

Taylor, A.H. and Joint, I. 1990. A steady state analysis of the "microbial loop" in stratified systems. Marine Ecology Program Series, **59**, 1-2, 1-17.

- TEMA. 1997. Programme of the 7th training-through-research international cruise of the R/V Professor Logachev in the Northeast Atlantic within the UNESCO/IOC "Floating University" Programme in co-operation with CORSAIRES and ENAM programmes of the EU, 7 July - 17 August 1997.
- Tett, p.1992. The ecology of plankton in Scottish coastal waters. Proceedings of the Royal Society of Edinburgh, **100B**, 27-54.
- Thiel, H., Pfannkuche, G., *et al.* 1988/89. Phytodetritus on the deep-sea floor in a central oceanic region of the Northeast Atlantic. Biological Oceanography, **6**, 203-239.
- Thistle, D., and Eckmann, J.E. 1990. What is the sex ratio of harpacticoid copepods in the deep sea? Marine Biology, **107**, 3, 443-447.
- Thomas, E., Booth, L., Maslin, M.A. and Shackleton, N.J. 1995. Northeastern Atlantic benthic foraminifera during the last 45,000 years: changes in productivity seen from the bottom up. Paleoceanography, **10**, 545-562.
- Thompon, K.R., Brindley, E. and Heubeck, M. 1997. Seabird numbers and breeding success in Britain and Ireland, 1996. Peterborough, Joint Nature Conservation Committee. UK Nature Conservation, **21**.
- Thomson, J., *et al.* 1986. RRS "Discovery" Cruise 160: 30 June-25 July 1986. Geochemical sampling over the Madeira and Porcupine Abyssal plains. Cruise Report of the Institute of Oceanographic Sciences, Wormley, **187**, 30 pp.
- Thomson, J., Colley, S., Anderson, R., Cook, G.T., MacKenzie, A.B. and Harkness, D.D. 1993. Holocene sediment fluxes in the Northeast Atlantic from super (230)Th sub(excess) and radiocarbon measurements. Palaeoceanography, **8**, 5, 631-650.
- Thorpe, S.A. 1984. RRS "Challenger" Cruise 6/84. 31 August - 16 September 1984. Mooring recovery in Faeroe-Shetland Channel and mooring deployment and associated work on Porcupine Slope. Cruise Report of the Institute of Oceanographic Science, Wormley, **167**, 15 pp.
- Thorpe, S.A. 1987. Current and temperature variability on the continental slope.
- Thorpe, S.A. 1987. RRS "Discovery" Cruise 169, 12-31 August 1987. Mixing near the west slope of the Porcupine Bank, and photosledge transects. Southampton Oceanographic Department, 19 pp & figs.
- Thorpe, S.A. 1988. RRS "Discovery" Cruise 173, 29 April - 9 May 1988. Recovery of moorings off the west slope of the Porcupine Bank and other work. Southampton Oceanographic Department, 15 pp.
- Thorpe, S.A. 1988. Benthic boundary layers on slopes. In: Nihoul, J.C.J. and Jamart, B.M. (eds.), Small-scale turbulence and mixing in the ocean. Amsterdam: Elsevier Oceanography Series, **46**, 425-433.
- Thorpe, S.A. 1990. The variability of mixing at the continental slope.
- Thorpe, S.A. and White, M. 1988. A deep intermediate nepheloid layer. Deep Sea Research, **35**, 9A, 1665-1671.
- Thorpe, S.A., Hall, p. and White, M. 1990. The variability of mixing at the continental slope. In: Charnock, H., Edmond, J.M., McCave, I.N., Rice, A.L., and Wilson, T.R.S. (eds.), The Deep Sea Bed: Its Physics, Chemistry and Biology, **331**, 183-194.
- Thurston, M.H. 1983. RRS "Challenger" Cruise 5/82. (IOS Cruise 514) 23 March -5 April 1982. Benthic biology of the Porcupine Seabight. Cruise Report of the Institute of Oceanographic Science, Wormley, **140**, 19 pp.

- Thurston, M.H. 1983. RRS "Challenger" Cruise 10/82 (IOS Cruise 516): 15-26 July 1982. Benthic biology of the Porcupine Seabight. Cruise Report of the Institute of Oceanographic Science, Wormley, **146**, 23 pp.
- Thurston, M.H. 1984. RRS Frederick Russell Cruise 6/84 (IOS Cruise 519) 7-13 April 1984. Benthic biology of the Porcupine Seabight. Cruise Report of the Institute of Oceanographic Science, Wormley, **162**, 19 pp.
- Thurston, M.H., *et al.* 1986. RRS "Challenger" Cruise 6A/85 (IOS Cruise 522): 13-28 June 1985. Benthic biology of the Porcupine Seabight. Cruise Report of the Institute of Oceanographic Sciences, Wormley, **178**, 36 pp.
- Thurston, M.H., Bett, B.J. and Rice, A.L. 1995. Abyssal megafaunal necrophages: Latitudinal differences in the eastern North Atlantic Ocean. *International Review Gesamt. Hydrobiologie*, **80**, 2, 267-286.
- Thurston, M.H., Bett, B.J., Rice, A.L., and Jackson, P.A.B. 1994. Variations in the invertebrate abyssal megafauna in the North Atlantic Ocean. *Deep Sea Research, A, Oceanography Research Paper*, **41**, 9, 1321-1348.
- Thurston, M.H., Rice, A.L. and Betts, B.J. (submitted). Latitudinal variation in invertebrate meiofaunal abundance and biomass in the North Atlantic Ocean abyss. *Deep Sea Research*.
- Troyanovsky, F.M. and Lisovsky, S.F. 1994. Russian (USSR) fisheries research in deep waters (below 500 m) in the north Atlantic. In: Hopper, A.G. (ed.), *Deep water fisheries of the North Atlantic slope*, 357-365.
- Tudhope, A.W. and Scoffin, T.P. 1996. Processes of sedimentation in Gollum Channel, Porcupine Seabight: submersible observations and sediment analyses. *Transactions of the Royal Society of Edinburgh*, **86**, 1, 49-55.
- Turley, C.M., Lochte, K. and Lampitt, R.S., 1995. Transformations of biogenic particles during sedimentation in the northeastern Atlantic. *Phil. Trans. Royal Soc., London*, 3-8, 179-190.
- Turon, J. L. 1978. Dinoflagellate cysts as indicators of Holocene palaeoenvironments in North Western Atlantic Ocean. Paleohydrological and palaeoclimatological signification. *Compte Rendu Hebd. Seances Academie Scientifique, Paris, Serie D*, **286**(25), 1861-1864.
- Turon, J.L. 1983. Environmental changes in the north eastern Atlantic since 18,000 years b.p.; dinocyst evidence. *Palynology*, **7**, 252.
- Tyler, P.A. 1986. Studies of a benthic time series: Reproductive biology of benthic invertebrates in the Rockall Trough. *The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh*, **88B**, 175-190.
- Tyler, P.A. and Billett, D.S.M. 1988. The reproductive ecology of elasipodid holothurians from the N.E. Atlantic. *Biological Oceanography*, **5**, 273-296.
- Tyler, P.A. and Gage, J.D. 1980. Reproduction and growth of the deep sea brittlestar *Ophiura ljunmani* (Lyman). *Oceanologica Acta*, **3**, 2, 177-185.
- Tyler, P.A. and Gage, J.D. 1982. The Reproductive Biology of *Ophiacantha bidentata* (Echinodermata: Ophiuroidea) From the Rockall Trough. *Journal of the Marine Biology Association of the United Kingdom*, **62**, 1, 45-55.
- Tyler, P.A. and Gage, J.D. 1983. The reproductive biology of *Ypsilothuria talismani* (Holothuroidea: Dendrochirota) from the NE Atlantic. *Journal of the Marine Biology Association of the United Kingdom*, **63**, 3, 609-616.

- Tyler, P.A. and Gage, J.D. 1984. The reproductive biology of echinothurid and cidarid sea urchins from the deep sea (Rockall Trough, Northeast Atlantic Ocean). *Marine Biology*, **80**, 63-74.
- Tyler, P.A. and Gage, J.D. 1984. Seasonal reproduction of *Echinus affinis* (Echinodermata: Echinoidea) in the Rockall Trough, Northeast Atlantic Ocean. *Deep Sea Research*, **31**, 4A, 387-402.
- Tyler, P.A. and Pain, S.L. 1982. The reproductive biology of *Plutonaster bifrons*, *Dytaster insignis* and *Psilaster andromeda* (Asteroidea: Astropectinidae) from the Rockall Trough. *Journal of the Marine Biology Association of the United Kingdom*, **62**, 4, 869-887.
- Tyler, P.A. and Zibrowius, H. 1992. Submersible observations of the invertebrate fauna on the continental slope southwest of Ireland (NE Atlantic Ocean). *Oceanologica Acta*, **15**, 2, 211-226.
- Tyler, P.A., Billett, D.S.M. and Gage, J.D. 1987. The ecology and reproductive biology of *Cherbonniera utriculus* and *Molpadia blakei* from the N.E. Atlantic. *Journal of the Marine Biology Association of the United Kingdom*, **67**, 2, 385-397.
- Tyler, P.A., Gage, J.D. and Billett, D.S.M. 1993. Reproduction and recruitment in deep-sea invertebrate populations in the NE Atlantic: a review of the options. In: Colombo, G. *et al.* (eds.), *Marine Eutrophication and Population Dynamics. Proceedings of the European Marine Biological Symposium*, 257-262.
- Tyler, P.A., Gage, J.D. and Pain, S.L. 1983. Reproductive variability in deep sea echinoderms and molluscs from the Rockall Trough. In: Cabioch, L., Glemarec, M. and Samain, J.F. (eds.), *Fluctuation and succession in marine ecosystems: proceedings of the 17th European Symposium on marine biology*, Brest, France, 27 September-1st October 1982. CNRS, Roscoff, France, IFREMER, Brest France, 191-195.
- Tyler, P.A., Pain, S.L. and Gage, J.D. 1982. The reproductive biology of the deep sea asteroid *Bathybiaster vexillifer*. *Journal of the Marine Biology Association of the United Kingdom*, **62**, 1, 57-69.
- Tyler, P.A., Bronsdon, S.K., Young, C.M. and Rice, A.L. 1995. Ecology and gametogenic biology of the genus *Umbellula* (Pennatulacea) in the North Atlantic Ocean. *International Review Gesamt. Hydrobiology*, **80**, 2, 187-199.
- Tyler, P.A., Gage, J.D., Paterson, G.J.L. and Rice, A.L., 1993. Dietary constraints on reproductive periodicity in two sympatric deep-sea astropectinid seastars. *Marine Biology*, 1993.
- Tyler, P.A., Harvey, R., Giles, L.A. and Gage, J.D., 1992. Reproductive strategies and diet in deep-sea nuculanid protobranchs (Bivalvia: Nuculoidea) from the Rockall Trough. *Marine Biology*, **114**, 571-580.
- Tyler, P.A., Muirhead, J.D., Gage, J.D. and Billett, D.S.M. 1985. Gametogenic strategies in deep sea echinoids and holothuroids from the NE Atlantic. In: Keegan, B.F. and O' Connor, B.D.S. (eds.), *Proceedings of the 5th International Echinoderm Conference Balkema, Rotterdam*, 135-140
- Tyler, P.A. Muirhead, A., Billett, D.S.M. and Gage, J.D. 1985. Reproductive biology of the deep sea holothurians *Laetmogone violacea* and *Benthogone rosea* (Elasipoda: Holothurioidea). *Marine Ecology Program Series*, **23**, 3, 269-277.
- UKDMAP Digital Marine Atlas. JNCC/ESAS Seabirds and Cetaceans Data.
- Van Aken, H.M. 1980. Average potential temperature distribution in the Northern Rockall Trough during JASIN '78. *JASIN News*, 16, 5-6.
- Van Aken, H.M. 1982. The density ratio of frontal intrusions in the North Rockall Trough. *Journal of Physical Oceanography*, **12**, 11, 1318-1323.



- Van der Land, J. 1987. Abyssal Priapulids (Vermes, Priapulida). In: Laubier, L. and Monniot, C. (Eds.), Deep sea benthic communities from the Gulf of Biscay. Biogas Cruise, 379-383.
- Vangriesheim, A. 1988. Deep layer variability in the eastern North Atlantic: The EDYLOC Experiment. *Oceanologica Acta*, **12**, 2, 149-158.
- Van Praet, M., Rice, A.L. and Thurston, M.H. 1990. Reproduction in two deep sea anemones (Actiniaria), *Phelliactis hertwigi* and *p.robusta*. *Programs in Oceanography*, **24**, 1-4, 207-222.
- Vanreusel, A., Vincx, M., Bett, B.J. and Rice, A.L. 1995. Nematode biomass spectra at two abyssal sites in the NE Atlantic with a contrasting food supply. *International Revue der Gesamten Hydrobiologie*, **80**, 2, 287-296.
- Van Rooij, D., Henriët, J.P. and the Belgica '96 and Porcupine-Belgica '97 shipboard parties RCMG 1997. Preliminary interpretation of a few high resolution slope sequences on the margins of the Celtic Sea and Porcupine Basin (Belgica Mounds area). Abstract, second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- Van Rooij, D., Henriët, J.P. & The Porcupine-Belgica '97 Shipboard Party. High-resolution seismic investigations of the Belgica-Logachev mound range on the eastern margin of the Porcupine Basin, SW of Ireland. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.115.
- Van Weering, T.C.E. and de Rijk, S. 1991. Sedimentation and climate induced sediments on Feni Ridge, Northeast Atlantic Ocean. *Marine Geology*, **101**, 49-69.
- Van Weering, T.C.E., Ganssen, G. and Labeyrie, L. (eds.), 1996. Ice rafting and palaeoceanography of the Northeast Atlantic Ocean: selected papers presented at the 7th meeting of the European Union of Geosciences held on 4-8 April 1993 in Strasbourg, France (Symposium F06). *Marine Geology*, **131**, 1-2.
- Van Weering, T.C.E., Kuipers, A. and Shipboard Scientific Party. 1996. A survey of the Rockall Margin. Unpublished shipboard report cruise RV Pelagia. August 2 - August 23, 1996 Galway - Texel.
- Van Weering, T.C.E., Stoker, M., Akhmetjanov, A. and ENAM Shipboard Scientists 1997. The role of along-slope currents in shaping the Rockall Trough margins. Abstract, second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- Vas, P. and Gordon, J.D.M. 1988. Trace metal concentrations in the scyliorhinid shark *Galeus melastomus* from the Rockall Trough. *Marine Pollution Bulletin*, 1988.
- Vas, P. and Gordon, J.D.M. 1993. Trace metals in deep-sea sharks from the Rockall Trough. *Marine Pollution Bulletin*, **26**, 400-402.
- Vas, P., Gordon, J.D.M., Fielden, P.R. and Overnell, J. 1993. The trace metal ecology of ichthyofauna in the Rockall Trough, north-eastern Atlantic. *Marine Pollution Bulletin*, **26**, 11, 607-612.
- Vaugelas, J. de, 1989. Deep sea lebensspuren: Remarks on some echiuran traces in the Porcupine Seabight, Northeast Atlantic. *Deep Sea Research, A, Oceanographic Research Papers*, **36**, 6A, 975-982.
- Vermeulen, N.J. 1997. Hydrography, surface geology and geomorphology of the deep water sedimentary basins to the west of Ireland. *Marine Institute, Marine Resources Series*, **2**, 41 pp.
- Wade, I.P., Ellet, D.J. and Heywood, K.J. 1997. The influence of intermediate waters on the stability of the eastern North Atlantic. *Deep Sea Research Part I: Oceanographic Research Papers, Part II: Topical studies in oceanography*, **44**, p.8.
- Walker, M., Tyler, P.A. and Billet, D.S.M. 1987. Organic and calorific content of the body tissues of deep sea elaspodid holothurians in the Northeast Atlantic Ocean. *Marine Biology*, **96**, 2, 277-282.

- Wanless, S. 1987. A survey of the numbers and breeding distribution of the North Atlantic gannet *Sula bassana* and an assessment of the changes which have occurred since Operation Seafarer 1969/70. Peterborough, Nature Conservancy Council. Research and survey in nature conservation, **4**.
- Watson, P.S. 1980. The seabirds of Northern Ireland and adjacent waters. Irish birds, **1**, 462-486.
- Webb, A., Harrison, N., Leaper, G., Steele, R.D., Tasker, M.L. and Pienkowski, M.W. 1990. Seabird distribution west of Britain. Peterborough, Nature Conservancy Council.
- Webb, C. 1986. Post larval morphology of some north-west European ophiuroids. The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh, **88B**, 311-312.
- Weller, R.A. 1982. The relation of near inertial motions observed in the mixed layer during the JASIN (1978) experiment to the local wind stress and to the quasi geostrophic flow field. Journal of Physical Oceanography, **12**, 10, 1122-1136.
- Weller, R.A., Payne, R.E., Large, W.G. and Zenk, W. 1983. Wind measurements from an array of oceanographic moorings and from F/S Meteor during JASIN 1978. Journal of Geophysical Research, C Oceans Atmos., **88**, C14, 9689-9705.
- Westerberg, H. 1991. Internal tidal mixing and the distribution of large suspension feeders in the Faeroe area. Summary in: Symposium on Marine Biology and Oceanography of the Faroe Islands. Reprinted from: Árbok 1990-91. Norðurlandahúsið í Føroyum, Torshavn 1992.
- Wheeler, A.J. 1997. Abstract and Itinerary: ENAM II "European North Atlantic Margin": Quantification and modelling of large-scale sedimentary processes and fluxes: 2nd Workshop, Kinsale, Ireland, 30/10/97-2/11/97.
- Wheeler, A.J. 1997. Tales from the deep sea: submarine avalanches, basal current activity, volcanic eruptions and ice-rafted debris in the Rockall Trough. Chimera, **12**, 7-14.
- Wheeler, A.J. and Devoy, R.J.N. 1997. Sea-level controls on patterns and processes of shelf to deep marine sedimentation. Abstract for ESF European Research Conference Series, Glacial-Interglacial sea-level changes in four dimensions: evidence of sea-level and of linked environmental changes at the land-ocean interface, Blarney, Ireland, 5/3/97-10/3/97.
- Wheeler, A.J. and Devoy, R.J.N. 1997. Sediment transfer and shelf edge dynamics in the northern Rockall Trough. Abstract for 3rd EU-MAST conference "Shelf-Edge Exchange Processes on the Continental/Oceans Margin of the NE Atlantic", Vigo, Spain, 14/5/97-16/5/97.
- Wheeler, A.J., Hayes, C., Devoy, R. and Van Weering, T. 1997. Depositional signals from the base of the continental slope: shelf-edge sediment transfer and remobilisation in the northern Rockall Trough. Abstract, second ENAM II workshop, 30 October - 2 November 1997, Kinsale, Ireland.
- Wheeler, A.J. *et al.* 1996. Preliminary investigations into sediment processes from the Barra Fan to Anton Dohrn Seamount, Northern Rockall Trough. ENAM II. [www.ucc.ie/ucc/research/crc/crccp4.htm](http://www.ucc.ie/ucc/research/crc/crccp4.htm), 2pp.
- Wheeler, A.J. *et al.* 1996. Preliminary results of sediment flux studies across the shelf break, Central Rockall Trough. ENAM II. [www.ucc.ie/ucc/research/crc/enam1.htm](http://www.ucc.ie/ucc/research/crc/enam1.htm), 2pp.
- Wheeler, A.J., Cronin, B., Kenyon, N., Satur, N. and Devoy, R.J.N. 1998. Channel architecture and activity in the Gollum Channel, Porcupine Seabight. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.57.
- Wheeler, A.J., Degryse, J.C. and Satur, N. In press. O.R.E. tech deep-tow sidescan sonar profiles of the northern Porcupine Seabight. In: Limonov, A.F., Kenyon, N.H. and Ivanov, M.K. (eds.), Carbonates

Mounds and Turbidite Channels from the Porcupine Seabight. UNESCO Reports in Marine Science, 1998.

White, M. 1996. Hydrographic measurements across the Irish Shelf and Porcupine Bank.

Whitehead, P.J.P., Bauchot, M.L., Hureau, J.C., Nielsen, J. and Tortonese, E. 1984, 1986. Fishes of the Northeastern Atlantic and the Mediterranean. Paris: UNESCO.

Williams, R. 1986. The occurrence of *Trilasmis kaempferi* (Cirripedia, Lepadomorpha) in the Rockall Trough on a previously unrecorded host, *Neolithodes grimaldi* (Decapoda, Anomura). The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh, **88B**, 309-311.

Williamson, D.I. 1986. A spider crab and its larvae. The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh, **88B**, 307-308.

Wilson, J.B. 1979. The distribution of the coral *Lophelia pertusa* (L.) [*L. prolifera* (Pallas)] in the Northeast Atlantic. Journal of the Marine Biological Association of the United Kingdom, **59**, 149-164.

Wilson, J.B. 1979. 'Patch' development of the deep-water coral *Lophelia pertusa* (L.) on Rockall Bank. Journal of the Marine Biological Association of the United Kingdom, **59**, 165-177.

Wilson, J.B. 1979. Biogenic carbonate sediments on the Scottish continental shelf and on Rockall Bank. Marine Geology, **33**, 3-4, 85-92.

Wilson, J.B. 1981. Biogenic carbonate sediments on the Scottish continental shelf and on Rockall Bank. Journal of the Geological Society, London, **138**, p.500.

Wilson, J.B. 1988. A model for temporal changes in the faunal composition of shell gravels during a transgression on the continental shelf around the British Isles. Sedimentary Geology, **60**, 95-105.

Wilson, J.B. and Desmond, J.M. 1986. Shelf break faunas on the eastern margin of the Rockall Trough and Faeroe Shetland Channel. The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh, **88B**, 315-316.

Wilson, J.B. and Herbon, C.V. 1998. Deep-water corals and associated faunas on carbonate mounds, north slope of Porcupine Bank and the south east slope of Rockall Bank. Deep Biosphere - Geosphere Coupling Project: "Carbonate Mud Mounds and Cold Water Reefs", Abstract, UNESCO - TTR7 Workshop, 7-11 February 1998, Gent, Belgium, p.65.

Witt, L.M. de, Levine, M.D. and Paulson, C.A. 1983. Generation of a semidiurnal internal tide during JASIN. Eos, Transactions, American Geophysical Union, **64**, 45, p.727.

Yau, C. and Mauchline, J. 1991. Distribution of pelagic cephalopods in the Rockall Trough. Bulletin of Marine Science, **49**, 1-2, p.670.

Zeitzschel, B. 1986. The dynamics of organic production in the Rockall Channel area. The Oceanography of the Rockall Channel. Proceedings of the Royal Society of Edinburgh, **88B**, 207-220.