



No. 34, June 2005

11th International Deep-Sea Biology Symposium **Southampton UK, 9 – 14 July 2006**

Second Announcement

Organisation

The 11th International Deep-Sea Biology Symposium will be held in Southampton, UK from Sunday 9 July to Friday 14 July 2006. The Symposium is being hosted by the National Oceanography Centre, Southampton (NOCS) (formerly known as the Southampton Oceanography Centre), the University of Southampton and the Southampton Institute. We are grateful for additional help from the OceanLab, University of Aberdeen, the Scottish Association for Marine Science, the Natural History Museum, the University of Liverpool, the British Antarctic Survey and the Joint Nature Conservation Committee.

The venue for the Symposium is the Southampton Institute Conference Centre in the heart of the city, close to shops, accommodation, travel connections, restaurants and nightlife. Special events will be held at the National Oceanography Centre, Southampton (NOCS) situated at the University of Southampton Waterfront Campus on Southampton Water and at the University Main Campus in the northern part of the city.

We aim to follow style set by previous Deep-Sea Symposia in providing an informal setting for members of the international deep-sea community to come together and to discuss and present the latest results in deep-sea research. At present, we do not propose to constrain what will be discussed at the Symposium by suggesting themes, but we will probably group talks by theme. Young scientists and PhD students are invited to attend and present their results. We encourage participants to submit interdisciplinary research and work with new technology in both the pelagic and benthic deep-sea realms.

Registration and a call for abstract will open in November 2005. We will arrange facilities for registration and submission of abstracts through the Symposium web pages.

In the meantime, however, it would be useful in our planning of you would indicate your intention to participate in the Symposium by send an e-mail or letter to Professor Paul Tyler (pat8@noc.soton.ac.uk) providing



**National Oceanography
Centre, Southampton**

**UNIVERSITY OF SOUTHAMPTON AND
NATURAL ENVIRONMENT RESEARCH COUNCIL**



National Oceanographic Centre, Southampton from the air.

your Title, First name, Family name (Surname), Institution, Address (including post-code/zip code and country), Telephone number and e-mail address. We will then make sure you know when registration opens. Please let us know if you would like to see any particular items in the Symposium programme. We will then consider these at our next Symposium Steering Committee meeting.

We plan to devote two sessions to the underpinning science needed for ocean management issues. We hope policy makers and offshore industry representatives will attend the Symposium for these discussions. As an incentive for the “users” of our science we intend to couple the ocean management sessions with a special event at the National Oceanography Centre, Southampton, show-casing the latest video and still photography images of deep-sea fauna. We hope this will include a preview of the BBC programme “Planet Earth”. In addition, we are organising a sponsored Underwater Image Competition for images taken deeper than 200m, using photographic or other means, and for photographs taken in the laboratory of animals collected deeper than 200m. We hope deep-sea scientists and commercial operators will enter their best images, which can then be used in the promotion of deep-sea science.

We intend to include special guest lectures on the final day to encourage participants to stay to end of the Symposium. There will be a Symposium survivors curry night for those who stay for the business meeting and vote on the location of the next Symposium.

We look forward to welcoming you in Southampton and to renewing our many friendships in the deep-sea community.

Symposium Organising Committee

Professor Paul Tyler (Chair), School of Ocean and Earth Science (SOES) DEEPSEAS Group, University of Southampton, NOCS.

Dr David Billett, George Deacon Division for Ocean Processes (GDD) DEEPSEAS Group, NOCS.

Professor Monty Priede, OceanLab, University of Aberdeen
Professor George Wolff, School of Earth and Ocean Science, University of Liverpool
Dr Gordon Paterson, Natural History Museum (NHM) London
Dr Kerry Howell, Joint Nature Conservation Committee (JNCC) UK
Dr Alex Rogers, British Antarctic Survey (BAS) Cambridge
Dr Eva Ramirez Llodra, NOC/CSIC Barcelona
Dr Bhavani Narayanaswamy, Scottish Association for Marine Science, Oban
Dr Phil Bagley, OceanLab, University of Aberdeen
Dr Maria Baker, GDD/SOES DEEPSEAS Group, NOCS
Dr Brian Bett, GDD DEEPSEAS Group, NOCS
Dr Jon Copley SOES DEEPSEAS Group, NOCS
Dr Adrian Glover, Natural History Museum, London
Professor Andrew Gooday, GDD DEEPSEAS Group, NOCS
Dr Lawrence Hawkins, SOES DEEPSEAS Group, NOCS
Dr Tammy Horton, GDD DEEPSEAS Group, NOCS
Dr Ian Hudson, GDD DEEPSEAS Group, NOCS
Dr Alan Hughes, GDD DEEPSEAS Group, NOCS
Dr Martin Shearer, SOES DEEPSEAS Group, NOCS
Miss Michelle Sterckx, Southampton Institute Conference Centre
Mrs Pam Talbot, George Deacon Division for Ocean Processes, NOCS
Dr Ben Wigham, OceanLab, University of Aberdeen
Emily Dolan, Daniel Jones, Janne Kaariainen, Kate Larkin, Abigail Pattenden, Tania Smith, Hanna Flint, Eulogio Soto, DEEPSEAS Group, NOCS.

Venue: Southampton

Southampton is situated on the south coast of England. It has a long maritime tradition. In 1620 the *Mayflower* took the Pilgrims from Southampton to the New World and in 1912 Southampton bid farewell to the *Titanic* on its ill-fated maiden voyage. An exhibition of memorabilia from the *Titanic* can be seen at the Maritime Museum. There are many venues in Southampton associated with the great ocean-going liners, including pubs like The Grapes.

The centre of Southampton was largely rebuilt after the Second World War and is a bustling commercial port. Many of the ancient walls of Southampton are still standing today and make for an interesting walk around the city. Owing to its unique double tide, large liners, container ships and car carriers can access the port all day and a wide variety of vessels can be seen in Southampton Water most of the time. The area around Southampton is also a haven for yachtsmen. Many round-the-world yacht races have started in Ocean Village just alongside the National Oceanography Centre. Southampton hosts a large international boat show in September each year.

To the north of Southampton is Winchester, a lovely cathedral city, home of the oldest cathedral in Great Britain and once home of the English Kings. Salisbury, 20 miles to the northwest, boasts another splendid cathedral with the UK's tallest spire. In between is Romsey with its Norman Abbey and stately home, Broadlands, the Palladian mansion home of Lord Palmerston and more recently Lord Mountbatten of Burma. North of Romsey is Mottisfont Abbey. Set amidst glorious countryside along the River Test, this 12th-century Augustinian priory was converted into a private house after the Dissolution of the Monasteries, and still retains the spring or 'font' from which its name is derived. The abbey contains a drawing room decorated by Rex Whistler and Derek Hill's 20th-century picture collection, but the key attraction is the grounds with magnificent trees, walled gardens and National Collection of Old-fashioned Roses, at their best in mid June.

West of Southampton lies the New Forest, recently designated as a National Park. This ancient forest consists of 145 square miles of open heath and woodland, a natural habitat for its famous wild ponies for hundreds of years and fantastic terrain for walking, biking, horse riding and camping. On the southern edge of the forest lies Exbury Gardens, home of the world-famous Rothschild collection of rhododendrons, azaleas and

camellias. Nearby is Beaulieu, the stately home of the Montagu family, with its abbey ruins dating from 1204 and the National Motor Museum, and Bucklers Hard, an unchanged 18th century village where wooden warships were built for the Royal Navy. Paul Tyler's stately home also lies within the bounds of the New Forest.

East of Southampton, along Southampton Water, you can explore the ruins of Netley Abbey, a massive Cistercian abbey founded in 1239. Jane Austen regularly boated up to the Abbey for picnics and the painter John Constable spent his honeymoon here. Other remarkable events at the abbey ruins in recent years include David Billett's performances as Gratiano in William Shakespeare's *The Merchant of Venice*. Further east is the city of Portsmouth with its naval history and tradition. The Historic Dockyard is home to Nelson's flagship HMS *Victory* as well as HMS *Warrior* and the remains of Henry VIII's ill-fated battleship *Mary Rose*.

South, across the Solent is the picturesque Isle of Wight. There are regular ferry services for cars and foot passengers. The Isle of Wight has been a holiday destination since Victorian times and includes Carisbrooke Castle, where Charles 1 was imprisoned, before he was tried and beheaded following the Civil War, and Osborne House, a home much frequented by Queen Victoria. Cowes hosts an annual sailing regatta in early August. Cowes is also the home of Ellen Macarthur, who sailed around the world in January/February 2005, single handed, in record time.

Within Southampton there are a large number of cultural and sporting venues. The Mayflower in Southampton is the largest theatre in Southern England where you can see West End musicals, ballet, operatic productions as well as comedy acts and evenings with celebrities. The Nuffield Theatre, based at the University of Southampton main campus, hosts all kinds of drama productions from Shakespeare to contemporary. There are regular chamber, classical, jazz and world music concerts at the University's Turner Sims Concert Hall.

Next to the Southampton Institute Conference Centre is the magnificent City Art Gallery which holds over 3,500 works of art covering six centuries of European culture, from the Italian Renaissance to French impressionism. The John Hansard Gallery, created in 1980 at the University of Southampton, combines the University's fine art and special photographic collection. Widely regarded as one of the best places in the country to see contemporary visual art, the gallery also hosts regular seminars, talks and workshops. The Millais Gallery opened at the Southampton Institute in 1996 to mark the centenary of the death of the distinguished Pre-Raphaelite painter, Sir John Everett Millais. Millais was born in Southampton in 1829.

Southampton Institute Conference Centre

The Southampton Institute Conference Centre is located in the centre of Southampton. It has two, tiered lecture theatres, each seating about 200 delegates. The two lecture theatres are situated in close proximity on either side of a central concourse. The lecture theatres are air conditioned and are equipped with the latest in conference technology. There are large breakout areas for poster display and for coffee and tea. Symposium delegates will be able to maintain e-mail access through a computing suite with over 100 terminals. This facility is used by the Southampton Institute students, but will be available to delegates at the time of the Symposium.

There will be a video link between the two lecture theatres. This will allow flexibility in how the



Southampton Institute Conference Centre.



Conference Centre: the Foyer -

Symposium is arranged. For large audiences the video link will be used, but, alternatively, the lecture theatres could be used for parallel sessions if the need arises. When the lecture theatres are linked we propose that one of the lecture theatres is used for those that wish to pop in and out of sessions without disturbing the speakers and the other delegates in the main auditorium.

Lunch will be served at the Café on the Square, part of the Conference Centre, but delegates can choose from a wide variety of catering opportunities just a few minutes away in the city centre. Delegates may also prefer to eat *al fresco* in the many parks around the Symposium venue.



and the computing suite.

National Oceanography Centre, Southampton

The National Oceanography Centre, Southampton (until May 1st 2005: Southampton Oceanography Centre) is one of Europe's leading centres for oceanographic science. The Centre is a joint venture between the Natural Environment Research Council (NERC) and the University of Southampton. It has some 450 research scientists, lecturing and support staff, as well as more than 500 undergraduate and postgraduate students.

The scientific mission of NOCS is to understand the functioning of the earth and its oceans as a physical, biological, geological and chemical system on a global scale. The NOCS is made up of the University's School of Ocean and Earth Science and four NERC Research Divisions working closely together. The NERC Divisions are organized in multidisciplinary groupings, including the George Deacon Division for Ocean Processes (GDD), the Challenger Division for Seafloor Processes, the James Rennell Division and the Ocean Engineering Division. In addition, the NOCS is home to the Research Ship Unit (RSU) which manages and operates NERC's fleet of research ships (RRS *Discovery*, RRS *Charles Darwin* and the *James Cook*, due to be commissioned in late 2006).

NOCS conducts long-term strategic research into all aspects of the deep ocean, including biology in the water column and on the ocean floor, geology and geophysics, chemical and physical oceanography, ocean-atmosphere interaction and ocean instrumentation. The DEEPSEAS Benthic Biology Group is a team of researchers studying deep-sea biology, drawn from the University of Southampton School of Ocean Earth Science (SOES) and the NERC George Deacon Division for Ocean Processes (GDD).

The Symposium will be organised by the NOCS DEEPSEAS Group. The DEEPSEAS Group has experience of working from the shelf break to abyssal depths in the Pacific, Indian, Atlantic and Southern Oceans. The DEEPSEAS Group works on a wide range of organisms from protozoans through to large invertebrates, living within, on and just above the seafloor.

The National Oceanography Centre, Southampton will be the venue for the Symposium ice breaker event with a BBQ on the quayside if the weather allows. We also intend to hold a special event at the NOCS on the Tuesday evening (11 July 2006).

Draft Programme of Events

Sunday 9 July National Oceanography Centre, Southampton (NOCS)
1800H Registration and ice breaker (BBQ on quayside)
 New videos from recent expeditions
 Underwater Image Competition exhibition

Monday 10 July Southampton Institute Conference Centre (SICC)

0830H Registration and setting up of posters
0930H First science session
1030H Coffee
1100H Second science session
1230H Lunch
1400H Third science session
1530H Tea
1600H Fourth science session
1800H End

1830H Reception – city centre
1930H Free evening

Tuesday 11 July Southampton Institute Conference Centre (SICC)

0830H Fifth science session
1030H Coffee
1100H Sixth science session
1230H Lunch
1400H Seventh science session - ocean management
1530H Tea
1600H Eighth science session - ocean management
1800H End

National Oceanography Centre, Southampton (NOCS)

1900H Showcase latest underwater science videos
BBC Planet Earth preview
Underwater Image Competition exhibition
Buffet supper

Wednesday 12 July Southampton Institute Conference Centre (SICC)

0830H Ninth science session
1030H Coffee
1100H Tenth science session
1230H Lunch
1330H Eleventh science session
1500H Excursion to Portsmouth Historic Dockyard
1600H Tour of *Mary Rose* and/or *HMS Victory*
1800H Evening reception on the deck of HMS Warrior
1930H Conference Dinner – HMS Warrior

Thursday 13 July Southampton Institute Conference Centre (SICC)

0830H Twelfth science session
1030H Coffee
1100H Thirteenth science session
1230H Lunch
1400H Fourteenth science session
1530H Tea
1600H Fifteenth science session
1800H End

University of Southampton, Main Campus

1900H Guest lecture – special event
Presentation of Underwater Image Competition prizes
2030H Free evening

Friday 14 July	Southampton Institute Conference Centre (SICC)
0830H	Sixteenth science session with invited lecture
1030H	Coffee
1100H	Seventeenth science session with invited lecture
1230H	Lunch
1400H	Eighteenth science session with invited lecture
1530H	Tea
1600H	Business meeting. Selection of venue for 12 th Deep-Sea Biology Symposium 2009. Award of Sir George Deacon Medal. Award of young scientist lecture and poster prizes.
1700H	End
1900H	Symposium survivors curry night (pay your own way. C. £20 per head)

Call for abstracts (papers and posters)

A call for abstracts will be made in October 2005. Facilities for the electronic submission of abstracts for talks and posters will be available from November 2005 at the Symposium web site <http://www.soc.soton.ac.uk/GDD/DEEPSEAS/symposium/>

BP Kongsberg Underwater Image Competition 2006

As part of the 11th International Deep-Sea Biology Symposium, a special underwater image and video competition is being launched. The competition, sponsored by BP and Kongsberg Maritime, will seek entries in 5 categories with the aim of showcasing the best biological and technical images and video clips from the deep sea. Entries from industry, scientists, support staff and the public are all welcomed.

Categories

- 1). Underwater Images (>200m depth).
(These can include images taken from ROVs, AUVs, Manned Submersibles, Landers and drop/bounce cameras).
- 2). Technical Underwater Images (>200m depth).
(These can include images taken with swath bathymetry, side-scan sonar, scanning sonar, acoustics or anything else that does not use a conventional camera system. This section will also include photo or video mosaic images).
- 3). Microscopic / specimen images of deep-sea species or features. We recognise it is not always possible to view the smallest components of the ocean and therefore we are looking some of the best microscope and specimen photography.
- 4). Fieldwork / Experimental Set-up. We want to see high class images of the equipment used or the experiments designed for science and technology at sea. Images of submersibles at work, specimen sampling, samples on deck or simply research platforms at sea (Vessels, ROVs, Ships, Grabs, Trawls).
- 5). Video Footage. We welcome short (<1min) video clips of exciting, novel and unique underwater observations, both technical and biological. We recognise the role video observations play in understanding the function of the ocean.

Technical details for the submission of entries to the BP Kongsberg Underwater Image Competition will be posted on the Symposium web pages. Entries will be accepted after October 2005.

Prizes

Each category will have 3 main cash prizes. 1st = £500, 2nd = £300, 3rd = £200.

In addition the panel will also decide upon 1 or more special contributions that did not win an individual prize but provided a noteworthy contribution to the competition.

Exhibition

All images will be viewed as part of the Deep-Sea Biology Symposium, with the winning entries being displayed in a local gallery during the week of the symposium. The winning images will be displayed as part of media coverage of the symposium and in a special publication showcasing the winning and highly commended entries.

Judging Panel

A panel of international photographers, scientists and representatives from our sponsors will be announced in due course.

Rules and Submission details to follow in due course, please view the website for regular updates.

Excursion and Socials

For the Southampton Symposium excursion we have decided to focus on historical venues in the Southampton region and to visit Portsmouth Historic Dockyard, where the Symposium Dinner will also be held. This will reduce the time spent travelling in coaches, but we think will provide an interesting half day out focusing on maritime themes for marine scientists.

Portsmouth is the home of the Royal Navy. Apart from being the base from which the Royal Navy operates today it also has a magnificent collection of historic ships, notably HMS *Victory*, HMS *Warrior* 1860 and the *Mary Rose*. It also has the fascinating *Mary Rose* Museum, Royal Naval Museum and Action Stations, an interactive attraction on the modern-day Navy. The Portsmouth Historic Dockyard was chosen as the UK's best large visitor attraction this year.

The *Mary Rose* is the only 16th century warship on display anywhere in the world. Built between 1509 and 1511, she was one of the first ships able to fire a broadside, and was a firm favourite of King Henry VIII. After a long and successful career, she sank accidentally during an engagement with the French fleet in 1545. Her rediscovery and raising were seminal events in the history of nautical archaeology.

HMS *Victory* is the Royal Navy's most famous warship. She is the world's oldest commissioned ship and a proud memorial to Vice Admiral Lord Horatio Nelson. 2005 marks the bicentennial of the Battle of Trafalgar. The exhibition and guided tours of the ship explain how HMS *Victory* was restored and recreates the conditions at sea for the men and boys who lived, worked, fought and died during the battle.

HMS *Warrior* 1860 was built to counter French advances in shipbuilding and design. During her heyday she was the, largest, fastest and most formidable warship the world had ever seen. HMS *Warrior* was the world's first complete iron hulled armoured battleship. She was powered by steam as well as sail and constructed of wrought iron. The iron was so thick in tests the most powerful guns of the day could not penetrate the armour, even at point blank range. She was built at a time when



Lord Horatio Nelson's HMS *Victory*.



HMS *Warrior*

the Surveyor of the Navy, Admiral Sir Baldwin Wake Walker, believed iron hulls would never replace wooden ships! Today she looks just as she did at the time of her first commission (1861 - 1864), although they don't keep sheep in pens, chickens and ducks in the boats, and cows in a manger on the main deck for food and milk anymore. Until 1979 HMS *Warrior* was used as a floating workshop alongside an oil jetty in Wales, without masts, engines or guns. She was restored to her original state at a cost of £8 million pounds.

The Symposium Dinner will be held on the gun deck of HMS *Warrior* at the long tables the crew used to drink and eat at. Entertainment will include traditional sea shanties and magic tricks at your table. Dance music will be provided by Shep Woolly and his Handsome Cabin Boys.

Registration Form

Facilities for electronic registration will be available from November 2005. Forms for postal registration will be available in the next Deep-Sea Newsletter. <http://www.soc.soton.ac.uk/GDD/DEEPSEAS/symposium/>

Travel

By Air

International flights can be made to a number of airports around London including Heathrow, Gatwick and Stanstead. Heathrow is the nearest and is about 70 miles from Southampton.

"Railair" Coaches link every hour from all Heathrow terminals to Woking Station (c. 30 minutes). Woking is on the direct rail line from London to Southampton (travel time from Woking is c. 60 minutes). There is also a direct coach link to Southampton (see National Express link below).

From Gatwick rail links can be made to Clapham Junction, South London and then down to Southampton. Alternatively there are a few trains that go directly to Southampton via the south coast line. Web link for rail information below. There is no direct coach link to Southampton (you have to travel to Heathrow first).

In addition, Southampton International Airport offers over 200 worldwide connections. There are flight connections from places such as Amsterdam or Paris to Southampton International Airport. The airport is situated on the north side of Southampton next to the M27 and is about 6 miles from the city centre. There are taxi, train and bus service connections into the City. Southampton Parkway station connects with the airport. The train journey to Southampton Central is about 10 minutes.

Cheap airlines may also fly to Bournemouth (about 40 minutes drive from Southampton).

By Train

Southampton is less than one and a half hours from Central London by rail. British Rail runs approximately 3 trains every hour from Waterloo Station, London to Southampton Central Station. At present, *Eurostar* passengers from Paris and Brussels travelling to London arrive at Waterloo.

For train enquiries please ring London 020 7928 5100 or Southampton 023 8022 9393. Also you can use the following web link to plan your journey:

http://www.nationalrail.co.uk/planmyjourney/time_table/journey_requirements.asp?&T2ID=4915_200537101036

By Road

By car Southampton has direct links from the M3, A33, M27 and A27.

From Central London, join the M3 and leave at Junction 13. For the National Oceanography Centre follow signs to Dock Gate 4 and the Waterfront. For Southampton Institute Halls of Residence and hotels follow signs for the City Centre and use the map.

From Heathrow take M4 west and then M25 anticlockwise (towards Gatwick airport). Take junction 12 off the M25 to join the M3 to Southampton. Follow signs to Southampton all the way, and signs for Southampton City Centre as you approach the city.

From Gatwick take M23 north towards London and then M25 clockwise (towards Heathrow airport). Take junction 12 off the M25 to join the M3 to Southampton. Follow signs to Southampton all the way, and

signs for Southampton City Centre as you approach the city.

The journey time from Central London is approximately 1 hour and 45 minutes, from Heathrow about 90 minutes, from Gatwick or Stanstead about two to two and a half hours.

National Express Coach Services offer direct services to/from Southampton and Heathrow, London, Bournemouth, Birmingham and many other main towns and cities in the country.

Web link for coach services: <http://www.nationalexpress.com/home/hp.cfm>

Regular taxi services are available from Airports and Central London to Southampton (pre booked the cost should be about £70 one way). Rail links and coaches are cheaper. Car hire is possible from all airports.

By Sea

Direct connections can be made from New York to Southampton Docks / National Oceanography Centre on the "Queen Mary 2": <http://www.cunard.com/QM2/home.asp>

Car ferry links can be made from several different ports in France to a number of locations along the south coast of England, including Portsmouth; about 30 minutes drive from Southampton.

Lodging

Southampton has accommodation to fit every budget. There are several hotels near the Southampton Institute Conference Centre as well as the Kimber Hall of Residence. The Halls of Residence will cost about £25 per night (breakfast included). Constructed in 1993, Kimber Hall is a highly attractive modern building. It is very pleasantly situated, overlooking Hoglands Park. It has 274 fully furnished study bedrooms, each with en-suite wc, washbasin and shower facilities. Kitchen/diners equipped with storage area, fridge/freezers, electric hobs, conventional and microwave ovens, kettles and vacuum cleaner. There is a Common Room with television and video recorder and a Laundry Room equipped with (cash operated) automatic washing machines, tumble dryers, and facilities for ironing. There are wheelchair access rooms, vending machines for drinks and confectionery, bicycle storage points and parking for 65 cars. All study bedrooms have an internet access point for connection to a PC. Kimber Hall is about a 5-minutes walk from the Conference Centre through the park and about 15 minutes walk from the National Oceanography Centre. (<http://www.solent.ac.uk/accommodation/default.asp?level1id=13911&level2id=483>)

Hotel accommodation can be arranged with the Travel Inn and Jurys Inn (c. £65 per night). Jurys Inn will open in June 2006. It will be a similar distance from the Conference Venue as the Travel Inn (see map web page given for Southampton city centre for location of Travel Inn). At a slightly greater distance from the Conference Centre there are the Novotel, the Ibis, the Holiday Inn, the exclusive De Vere Hotel and the historic Dolphin and Star Hotels.

Facilities for the electronic booking of accommodation, at discounted rates for some hotels, will be available through the Symposium web pages at the time registration opens in November 2005 (<http://www.soc.soton.ac.uk/GDD/DEEPSEAS/symposium/>).

Maps

A map showing the location of Southampton relative to London, Heathrow, and Gatwick can be found at: <http://www.solent.ac.uk/pdf/locatormap.pdf>



Kimber Hall of Residence.

A map showing the location of Southampton International Airport, and the motorway approaches to Southampton can be found at: <http://www.solent.ac.uk/pdf/motorways.pdf>

A map showing the location of the Southampton Institute Conference Centre, Kimber Hall, and some (but not all) of the hotels available can be found at: <http://www.solent.ac.uk/pdf/citycentre.pdf>

A map showing the location of the Southampton Oceanography Centre can be found at: http://www.soc.soton.ac.uk/soc_home2.php?pagetype=map

A map showing the location of the University of Southampton can be found at: <http://www.soton.ac.uk/AbouttheUniversity/Southamptongettinghere/CampusLocations/#d.en.1648>

Links

National Oceanography Centre, Southampton <http://www.soc.soton.ac.uk/>
DEEPSEAS Group, SOC <http://www.soc.soton.ac.uk/GDD/DEEPSEAS/>
University of Southampton <http://www.soton.ac.uk/>
Southampton Institute <http://www.solent.ac.uk/>
Deep-Sea Biology Symposium web site <http://www.soc.soton.ac.uk/GDD/DEEPSEAS/symposium/>

OceanLab, Aberdeen <http://www.oceanlab.abdn.ac.uk/>
Dept of Earth and Ocean Sciences, Liverpool http://www.liv.ac.uk/earth_sciences/dept/
Natural History Museum <http://www.nhm.ac.uk/>
British Antarctic Survey <http://www.antarctica.ac.uk/>
Scottish Association for Marine Science <http://www.sams.ac.uk/>
Natural Environment Research Council <http://www.nerc.ac.uk/>
Joint Nature Conservation Committee <http://www.jncc.gov.uk/>
Institut de Ciències del Mar (ICM-CSIC) <http://www.icm.csic.es/>

Kimber Hall of Residence: <http://www.solent.ac.uk/accommodation/default.asp?level1id=13911&level2id=483>

Southampton Tourist Information Centre

<http://www.southampton.gov.uk/leisure/tourism/default.asp>
<http://www.visit-southampton.co.uk/>
<http://www.hants.gov.uk/titanic.html>
http://www.hants.gov.uk/localpages/south_west/southampton/index.html
<http://www.southampton.gov.uk/leisure/arts/art-gallery/>

Excursion and Symposium Dinner details :

<http://www.flagship.org.uk/welcome.html>
<http://www.maryrose.org/>
<http://www.hmswarrior.org/>

Contact details

If you need any further information on the Symposium please do not hesitate to contact us:

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Please note that as from 1 May 2005 the Southampton Oceanography Centre has changed its name to the National Oceanography Centre, Southampton (NOCS).

XXVIII SCAR & COMNAP XVI – OPEN SCIENCE CONFERENCE 25-31 July 2004 in Bremen

More than 1000 scientists and governmental bodies participated in the conference.

First day panel discussion and key note lectures, second and third day individual sessions (10 in parallel), last two days scientific standing groups. Angelika Brandt participated in the life sciences scientific standing group. One of the topics was the discussion about SCAR-EVOLANTAR being replaced by SCAR-EBA in January of 2006. During a workshop held at the SCAR Biology Symposium in Curitiba Brazil (<http://www.pucpr.br/scarbiologysymposium>) shortly after the ICC6 (25.-29. July 2005), SCAR-EBA will be implemented, it will start 1.1.2006. Further details can be downloaded from the SCAR webpage (Life Sciences Scientific Standing Group - LSSSG).

SCAR-EBA summary (*describe the past, understand the present, predict the future*)

It is proposed to form a Scientific Research Programme (SRP) of the Life Sciences Scientific Standing Group (LSSSG) entitled ***Evolution and Biodiversity in Antarctica (EBA): the response of life to change***, which will replace **SCAR EVOLANTAR** on 1.1.2006. The new SCAR Life Sciences Programme will use a suite of modern techniques and an interdisciplinary approach, to explore the evolutionary history of selected modern Antarctic biota, examine how modern biological diversity in Antarctica influences the way present-day ecosystems function, and thereby predict how the biota may respond to future environmental change. For the first time it will integrate understanding across the major realms of Antarctic biology (marine, terrestrial, freshwater, from molecules to ecosystems) into the cohesive picture that is a prerequisite of Earth System Science. It will advance evolutionary and ecological science using model systems and organisms from the Antarctic, facilitating interdisciplinary investigations of systems responses to change.

To achieve these goals the overarching objectives of this programme are to:

1. Link with geosciences to establish more clearly the evolutionary history of the Antarctic biota.
2. Compare evolutionary adaptations to the Antarctic environment in a range of organisms.
3. Explore patterns of gene flow within, into and out from the Antarctic, and determine their consequences for population dynamics.
4. Identify patterns and examine diversity of organisms, ecosystems and habitats in Antarctica, together with the ecological and evolutionary processes that control these.

Study the impact of past, current and predicted environmental change on biodiversity and the consequences for Antarctic marine, terrestrial and limnic ecosystem function.

Key scientific areas to be tackled in the EBA programme will include for example evolutionary radiations and unknown areas.

CIRCUM-ANTARCTIC CENSUS of MARINE LIFE

The International Polar Year (IPY) 2007/2008 will provide a rare opportunity for national Antarctic programs to cooperate in the conduct of large-scale projects that would not otherwise be possible and that will stand as benchmarks in their fields for many years to come. Australia has proposed that there be an international, centrally-coordinated Circum-Antarctic Census of Antarctic Marine Life (CAML) conducted during the Antarctic summer 2007/08. This will be a significant contribution to IPY. CAML will be supported by SCAR-EBA and will try to gain synoptic sets of multidisciplinary observations to establish the status of the polar environment.

The main objective of CAML is to describe and define the biodiversity of marine life in the oceans surrounding Antarctica.

More information about CoML is available on <http://www.coml.org/coml.htm>.

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ANDEEP III WITHIN THE FRAMEWORK OF CeDAMar

ANDEEP contributes to SCAR-EVOLANTA (Evolution of Antarctic Organisms) as well as to CeDAMar (Census of the Diversity of the Abyssal Marine life), a Census of the Marine Life Project.

CeDAMar is designed to overcome the widely recognized “taxonomic impediment” by means of freely available databases of taxonomists, a series of taxonomic workshops on deep-sea organisms, and an exchange program for taxonomists. As a field project of the Census of Marine Life (CoML), CeDAMar is aimed at providing a broad foundation of knowledge on the biodiversity and distribution of abyssal species. A series of internationally coordinated cruises will help to achieve this goal. The results generated by the CeDAMar program will be made available through a series of open databases linked with the Ocean Biogeographic Information System (OBIS) and the Global Biodiversity Information Facility (GBIF).

The general objective of CeDAMar is to *document actual species diversity of abyssal plains as a basis for global-change research and for a better understanding of historical causes and ecological factors regulating biodiversity*. In order to enhance the interpretability and comparability of results, CeDAMar will focus on the relatively homogeneous, large-scale habitats of the abyssal plains with special attention to latitudinal gradients. To begin this endeavour, the South Atlantic Ocean from the tropics to the Antarctic Ocean was chosen for Germany-based expeditions. U.S. American, Japanese and French expeditions to the manganese nodule areas of the central North Pacific Ocean will provide a second focal point. Additionally, the Mediterranean deep-sea basins will be the scope of a joint-venture between German and Greek institutes.

In addition to scientific description of 500 common abyssal species, CeDAMar will participate in CoML’s DNA Barcoding initiative (see “DNA Barcoding” at website: <http://www.coml.org/coml.htm>)

Selected major questions CeDAMar seeks to answer are:

- Based on statistically reasonable estimates, how many species are there in the abyssal deep sea?
- Are cosmopolitan species common in the deep sea? Are there endemic species in the abyss?
- Are there latitudinal gradients in species richness? Is the diversity of a given basin similar to the diversity of basins in other oceans at similar latitudes?
- Is there gene flow between distant abyssal communities of the same species? Are there biogeographic barriers for the distribution of abyssal fauna?
- What factors are correlated with high or low species richness? Do organisms of different size classes respond similarly to environmental factors?

To date, two expeditions organized in Germany are part of CeDAMar: ANDEEP I & II (Southern Ocean, RV *Polarstern*, 2002) and DIVA 1 (Angola Basin, RV *Meteor*, 2000).

The expeditions ANDEEP I & II were planned, organized and realized from the Zoological Museum of the University of Hamburg with support from the Alfred-Wegener-Institute for Polar and Marine Research (AWI).

The expeditions took place on board of RV *Polarstern* (ANT XIX 3&4) from January to April 2002 and were joined by scientists from 13 nations, who covered scientific questions ranging from geology/palaeontology to sedimentology to biology. ANDEEP focussed on the distribution and biodiversity of organisms of size classes ranging from meio- to megafauna. A standardized set of gears (CTD, SPI [sediment surface- and profile imaging system], multicorer [MUC], vegematic box corer [GKG], epibenthic sledge [EBS], and Agasiz Trawl [AGT]) was employed at 22 stations (Fig. 1).

In general ANDEEP I & II aimed at conducting the first base-line survey of the deep-water benthic fauna of the Scotia and Weddell Seas, and at the investigating the evolutionary and ecological processes and oceanographic changes which have resulted in the present biodiversity and distributional patterns in the Southern Ocean deep sea.

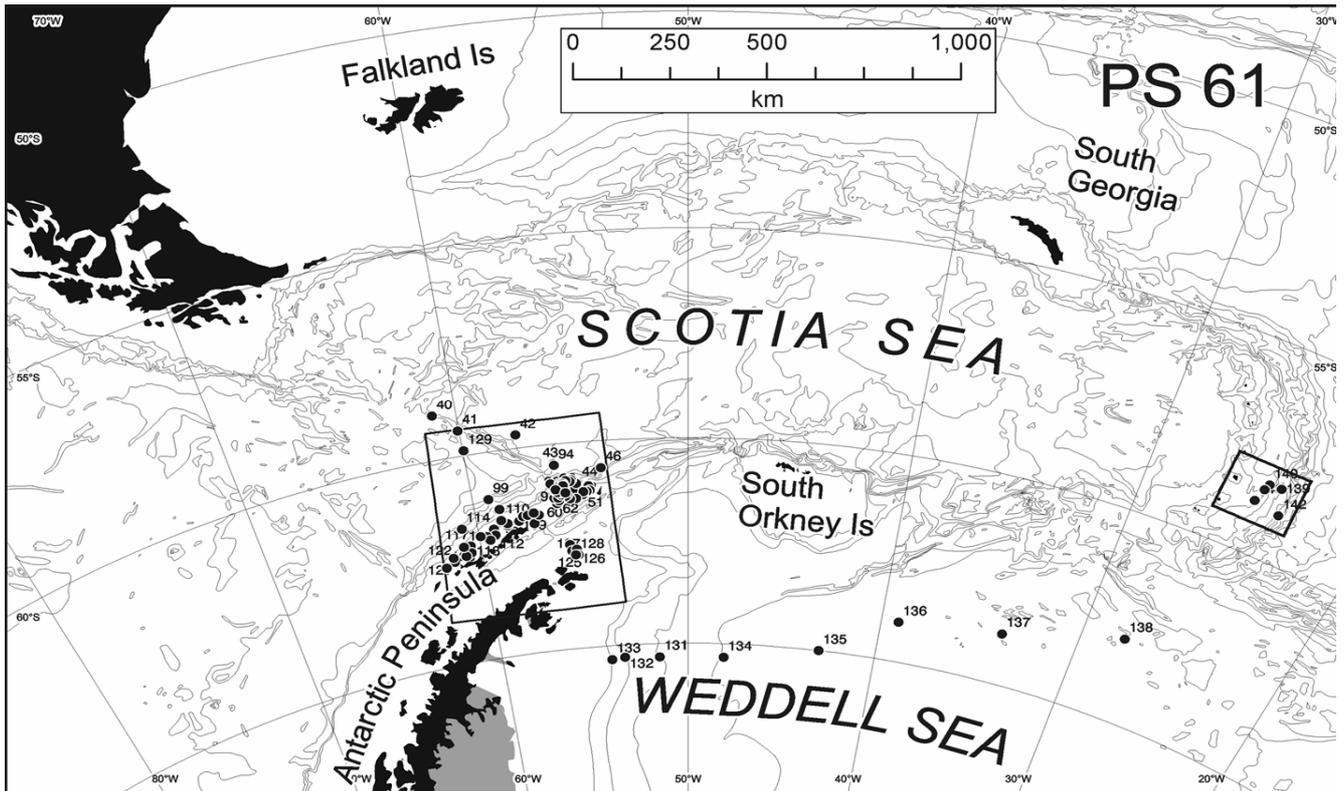


Fig. 1. Stations of ANDEEP I & II

First results were presented during the IBMANT/ANDEEP Workshop in Ushuaia, Argentina (9.-14.10.2003) and are available as extended abstracts in a workshop booklet. Publication of a Deep-Sea Research Special ANDEEP volume, which will be dedicated to the late Howard Sanders, is underway.

ANDEEP is linked to DIVA in as much as the northward flow of Southern Ocean deep water might have a potential impact on the occurrence and distribution of species living north of the Convergence in the Atlantic deep sea. General aims and the background for the ANDEEP III Expedition, demonstrating how ANDEEP III fits into CeDAMar, are summarised in the framework of the ANDEEP Expedition and the explanation of how the German proposals are integrated.

With ANDEEP III, the range of the studied area of ANDEEP is extended to the eastern Weddell Sea and the Cape Basin off South Africa. Based on a broader database, ANDEEP III aims at testing hypotheses of ANDEEP I & II.

Some of the questions born from the first preliminary results obtained during ANDEEP I & II are:

- Is there evidence for radiation and speciation processes in the abyssal Southern Ocean in the past and/or present (Contribution to SCAR/ EVOLANTA)? What can we say about the degree of endemism in the abyssal Southern Ocean?
- Is there a faunal break between slope and abyssal plain, or does the eurybathy observed on the shelf and slope extends to abyssal plains?
- Is there species overlap between the abyssal Southern Ocean and the Cape Basin, and if so, to which extent?
- Are there differences in abyssal biodiversity with latitude from the Cape Basin towards the abyssal Southern Ocean off Kapp Norvegia?
- What can we say about species turnover on a longitudinal gradient in the Weddell Sea?

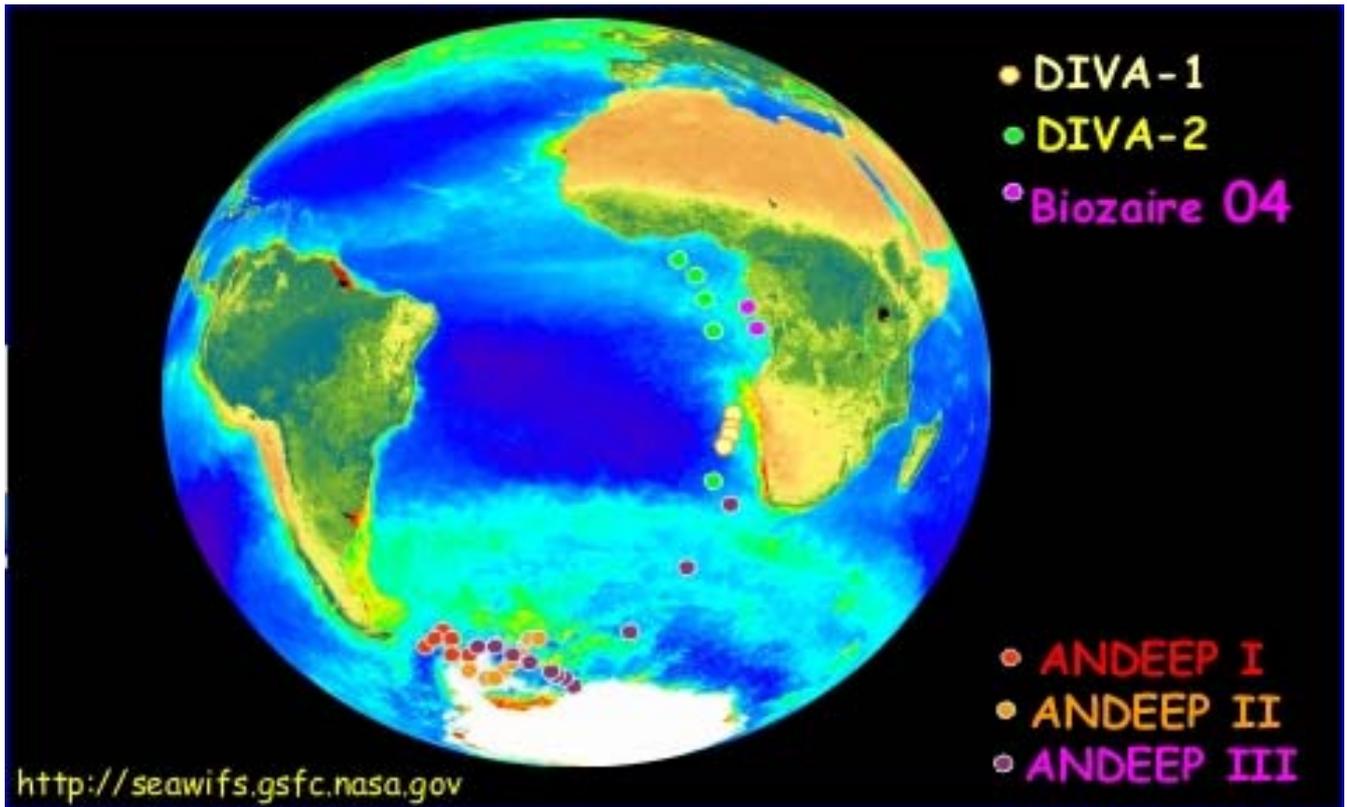
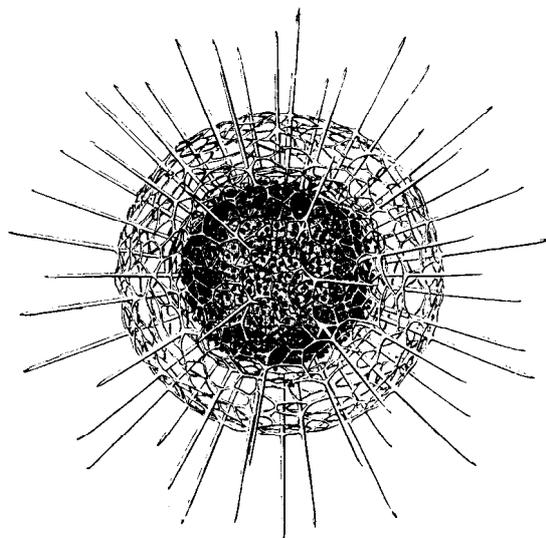


Fig. 2. Current CeDAMar projects and target areas of research. The figure shows schematically the sampling localities of ANDEEP I & II, DIVA 1, and expeditions planned in the near future in the framework of CeDAMar (<http://www.coml.org/descrip/cedamar.htm>), which is one of the core field projects of the Census of Marine Life (<http://www.coml.org/coml.htm>) at the beginning of 2005.

CENSUS OF THE DIVERSITY OF ABYSSAL MARINE LIFE



CeDAMar



Haliomma wylillei

BORING BIVALVES IN THE ARCTIC DEEP SEA? FIRST RECORD OF *XYLOPHAGA* SHELLS (MOLLUSCA: BIVALVIA: PHOLADIDAE) FROM THE GREENLAND SEA

The wood-boring bivalve genus *Xylophaga* and two other genera, *Xyloredo* and *Xylopholas*, all in the pholadid subfamily Xylophaginae, consist of predominantly deep-water species (Knudsen 1961; Turner 1972a & b; Harvey 1996), with only few being found in shallow water (Santhakumaran 1980). Two Japanese genera, *Neoxylophaga* and *Metaxylophaga*, are from sub littoral depths. None of the species in the subfamily have been recorded from Arctic areas.

In 1994, on its cruise ARK X/1, "Polarstern" took a dredge sample (station 31-09) at 74° 53.52'N, 12° 35.39'W to 74°53.63'N, 12°25.39'W, depth 1525 to 1509 m (Fig. 1). The mollusks from that station are a mixture of species. Some, as *Diaphana lactea* (Jeffreys) and *Hyalopecten frigidus* (Jensen), are associated with the abyssal region of Arctic seas (Knudsen 1985), while others, as *Alvania wyvillethomsoni* (Friele) and *Philine finmarchica* (M. Sars), are part of the Arctic shelf/continental slope fauna element (Schjötte in press) that does not descend to abyssal depths.

While going through this sample I came across two worn and damaged shells of a wood-boring bivalve different from *Psiloteredo megotara* (Hanley), which is presently the only such species known from Greenland waters (and this is from West Greenland only). There was no driftwood in the sample. The valves are a left and a right one, but judging from their different size, from different specimens. The left valve is shown in Fig. 2. They are not teredinids but of some xylophagan species. If pressed to put a name on them I would call them *Xylophaga* cf. *praestans* Smith, 1903, but before going deeper into a discussion of their surprising presence on the continental slope off North East Greenland, we shall go back in time to another expedition and a different area.

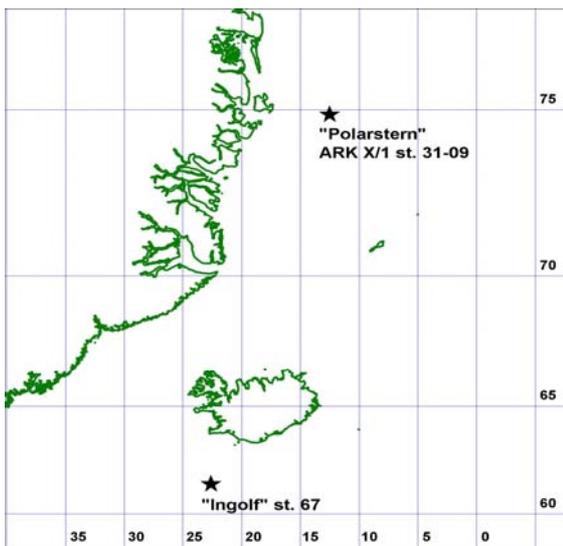


Fig. 1. Location of the two stations.

In 1896, the "Ingolf" Expedition found some sunken driftwood containing a mixture of boring bivalves on station 67 (61°30'N, 22°30'W, 1836 m) south of Iceland (Fig. 1). Roch (1931) included two species, *Psiloteredo megotara* (Hanley) and *Nototeredo norvegica* (Spengler), in a report on teredinids in Scandinavian museums. The material in the ZMUC collection consists of empty shells, but the notion that these shallow-water species had not actually been living in the location where they were found seems to have escaped Roch, who gladly used them when making notes about the zoogeography of the two species. Lesson number one: Don't draw hasty conclusions when wood-boring bivalves turn up in new places.

Together with the teredinids Roch found material of another boring bivalve, which he identified as *Xylophaga dorsalis* Turton. Here it seems to have escaped his attention that *X. dorsalis* is a shallow-water species, while one of the specimens he examined was taken alive from 1836 m depth.

Time went by, and one day material from "Ingolf" St. 67 came to the attention of Ruth Turner, who (Turner 1972a) used it to describe *Xyloredo ingolfia* n. gen., n. sp. She didn't see the material that Roch had identified as *Xylophaga dorsalis*, but it is clearly *X. ingolfia*. Lesson number two: This demonstrates the difficulty with identifying Xylophaginae when one does not have (or, like Roch, does not take notice of) the soft parts.

Returning to the "Polarstern" *Xylophaga* and remembering to take notice of the lessons from the "Ingolf" wood sample, we find two possibilities for the origin of the NE Greenland shell valves.

The first and in my opinion most likely one is that they belong to a shallow-water species and were rafted to the place from far away. Since there are no Xylophaginae known from shallow water anywhere near the Arctic Ocean, the most reasonable place of origin would be a Norwegian fiord. Four *Xylophaga* species are

known from the Trondheimsfjord, including *X. praestans* and *X. dorsalis* (Santhakumaran 1980). This would probably be the first record of driftwood taking a route from Norway to NE Greenland.

There is, however, some disagreement between the Greenland Sea shells and the four Norwegian species. Even *Xylophaga praestans*, which seems most similar, does not normally exhibit the very marked groove from the umbo across the posterior half of the shell to the margin (see arrow on Fig. 2a), and the Greenland Sea shells might belong to an undescribed species.

Thus, it is possible that at least one *Xylophagainae* species lives on sunken driftwood in the deep Arctic Ocean and/or the Greenland-Norwegian Sea. There is no apparent reason why this could not be the case. Substantial amounts of driftwood are available everywhere in high Arctic waters. Future finds may show whether the NE Greenland shells were transported there or whether they belong to a species actually living in the area.

Thanks to Prof. Angelika Brandt for the opportunity to study the Polarstern material.

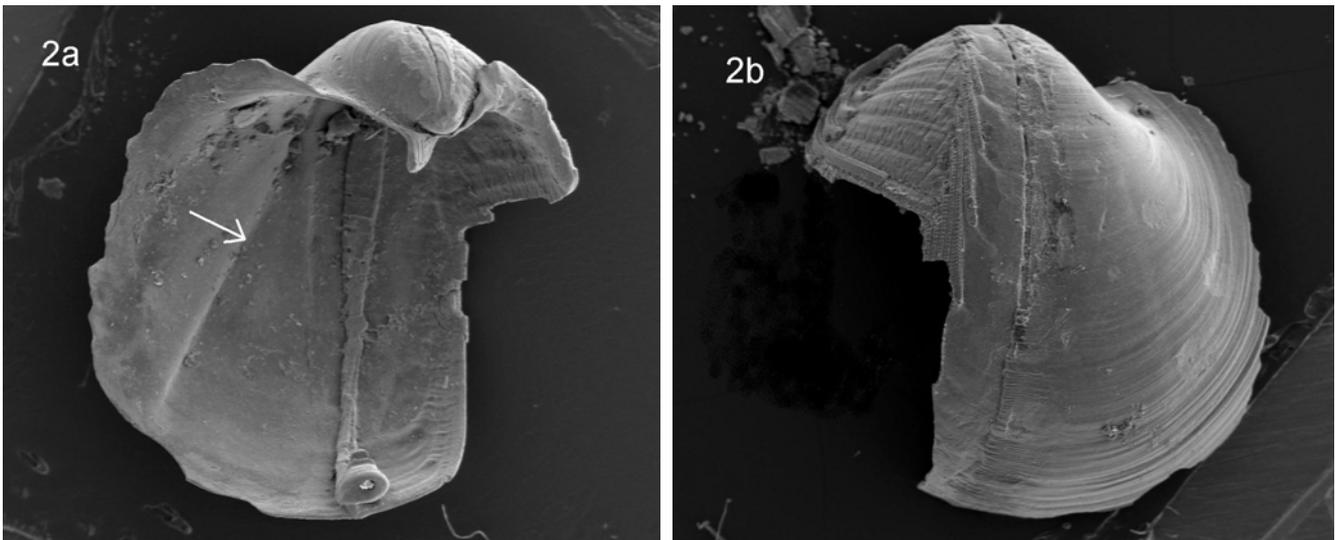


Fig. 2. Internal (a) and external (b) view of the left shell of *Xylophaga* aff. *praestans* from “Polarstern” ARK X/1, St. 31-09. Arrow on 2a indicates the conspicuous posterior groove from the umbo to the rim.

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FISHERMEN HELP RECORDING THE BLACK CORAL FROM CANADA

In response to the article “The Bathyal Greenlandic Black Coral Refound: Alive and Common” written by Ole Tandal in the last Deep-Sea Newsletter No. 33 February 2004, I would like to add a couple of records which have recently been recorded of the mentioned species *Bathypathes arctica*. Information to date as outlined by Ole Tandal identifies *B. arctica* as a potential endemic species to Greenland waters. As part of the research I conducted in 2000-2001 investigating the distribution of deep sea corals off Atlantic Canada, I found one specimen from off the coast of Newfoundland and a second specimen was reported from the same region approximately two years later.

During my research in 2000-2001 I interviewed a number of fishermen in Newfoundland and Nova Scotia about their local knowledge of past and present distributions of deep sea corals. During one interview with a gillnet fisherman in Newfoundland, the fisherman presented me with a specimen of which I identified (with help from Dr. Dennis Opresko) as *B. arctica*. The fisherman reported catching the specimen in a gillnet sometime between 1999-2000 while fishing in deep water (700-900 m) off the coast of Newfoundland. The location where he caught the coral is shown in Fig. 1.

As another means of obtaining data on the distribution of deep sea corals off Atlantic Canada, the Canadian Department of Fisheries and Oceans based at the Bedford Institute of Oceanography agreed to start a program whereby as part of the requirements to record fisheries by-catch, fisheries observers on vessels fishing from Nova Scotia were also to record, and if possible keep, deep sea coral by-catch. As a result of this program a second specimen of *B. arctica* was discovered in 2002 in the same region but at a greater depth (900-1100 m) than the previous mentioned specimen (Fig. 1 shows the location where it was caught and Fig. 2 shows the specimen).

These two new records extend our current knowledge of the range of this species generally thought to be endemic to the waters around Greenland. This is another example of how much more there is to uncover in our deep-sea environments. It also demonstrates that fishermen hold valuable local knowledge of the marine environment.

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Research presented in the above article was carried at Dalhousie University, Halifax, Nova Scotia in conjunction with the Canadian Department of Fisheries and Oceans.

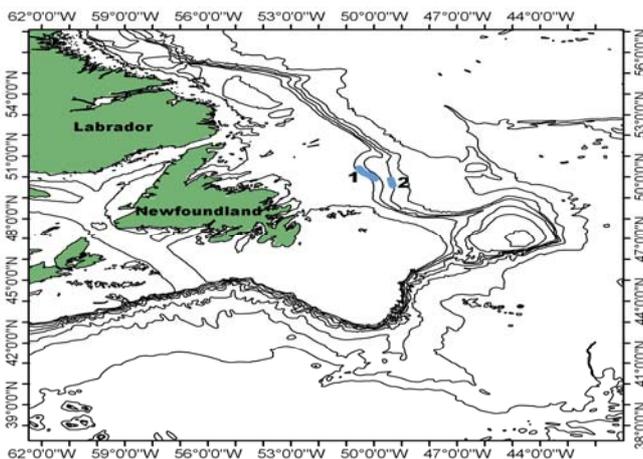


Fig. 1. The locations of two specimens of *Bathypathes arctica* reported off the coast of Newfoundland over the past four years. 1) A specimen caught in a gillnet between 1999-2000, 2) The location of the specimen caught off Newfoundland and brought to the Bedford Institute of Oceanography by a fisheries observer in 2002.

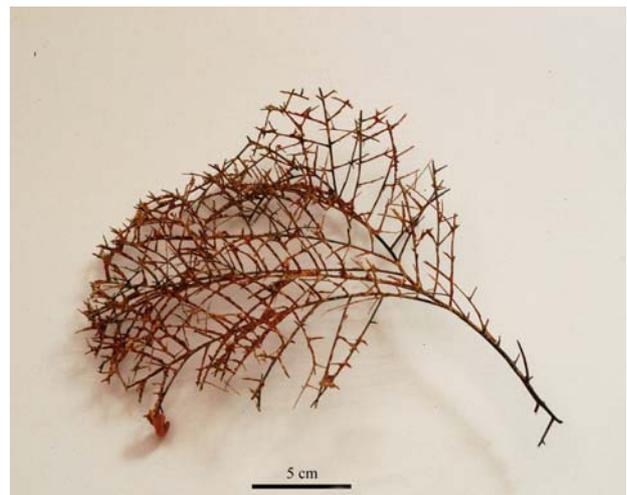


Fig. 2. A specimen of *Bathypathes arctica* caught off Newfoundland and brought to the Bedford Institute of Oceanography by a fisheries observer in 2002.

THE HMS *CHALLENGER* PHOTOGRAPHS

The Challenger Expedition, 1872-1876 – A Visual Index

Eileen V. Brunton, 2004

The Natural History Museum, London

Second Edition, 243 pp. £ 25,-

ISBN 0 565 0 91913.

The British *Challenger* Expedition was the greatest and probably the most significant scientific enterprise of all times, bringing together all the known branches of marine science into one circumnavigatory expedition of a duration of no less than four years.

The scientific aims were laid down by the Royal Society of London. In the “Concluding Observations” of the detailed instructions it is noted: “Every opportunity should be taken of obtaining photographs of native races to one scale”.



The Challenger at Bermuda.

To meet this requirement, two “photographic work rooms” (dark and light) were installed on the middle port side of the main deck, but details on equipment and cameras are not known. No less than three subsequent photographers were employed, since the first one for unknown reasons deserted already in Cape Town and his successor in turn deserted at Hong Kong.

The first result of their efforts appeared in 1885 as 35 large-sized, excellent photographic reproductions and 16 woodcuts in the impressive “Narrative of the Cruise” in the first two volumes of the *Challenger Report*.

Already during the voyage, photographs could be bought on board at one shilling each. An “Official Album” with photographs was kept and shown to impress visiting dignitaries, but this collection has never come to light. After the expedition individual images or a complete set of 350 photos could be ordered in accordance with J. Horsburgh’s Catalogue, 1885. The 350 glass negatives under Horsburgh’s keeping eventually ended in the Natural History Museum in London.



Excursion (with rifle) on St. Thomas, West Indies. From right: Sir Wyville Thomson, Expedition Leader, Dr. Rudolph von Willemoes-Suhm and an unidentified person.



The Japanese High Priest of Kobe and his family on board.

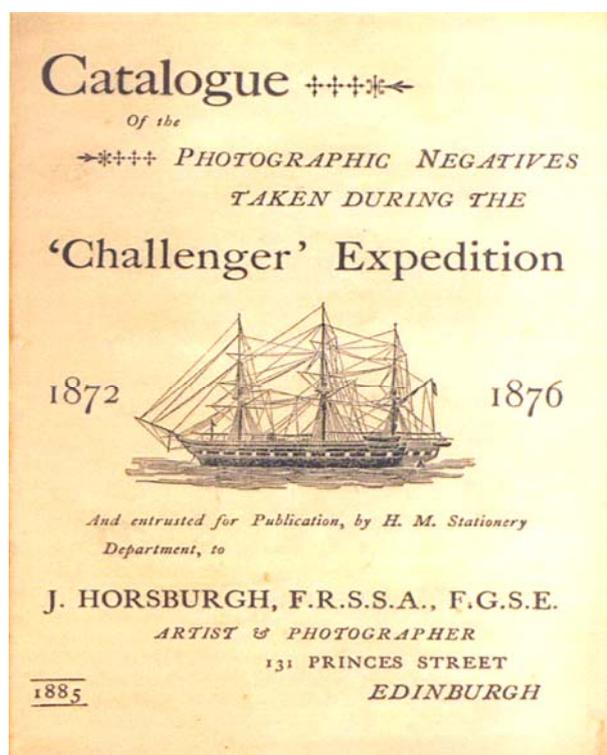
The present “Visual Index”, published by librarian Eileen V. Brunton, provides reproduction and provenance of the Horsburgh photographs and the additional about 500 surviving photographs, being the result of the author’s detective efforts. The 500 additional photos come from a number of albums: Moseley’s at Oxford University and Buchanan’s three at Cambridge University, three in the Hydrographic Office in Taunton and three in the Saarlands University originally belonging to the participating German zoologist R. von Willemoes-Suhm who died at sea in 1875 during the voyage.

The main advance on the First Edition (1994) is the accession of unknown photographs, particularly the personal album of Alfred Carpenter, for part of the time the photographer on board; it was recently donated to the Natural History Museum. Other advantages are a larger and clearer image format (4 images per A4 page instead of 6) and the relating text being now presented with the photo.

The Index is an A4 paperback; it is spiro-bound which facilitates the leafing through but is no good in a bookcase. After the introduction, with interesting details, follows the pictorial index with approximately 765 images, fortunately showing much more than the desired “native races”: views of ports and landscapes, buildings and vegetation, groups of crew and guests on board the ship, several of the artist J. J. Wild’s drawings and even gold diggings at Halifax and martial wall frescoes in a guard room at Gibraltar.

The Visual Index will not only appeal to historians of science, oceanography and naval affairs but also to all those who are fascinated by the efforts of the dedicated scientists of “the good old days” who in spite of hardships in their congested research ships were able to obtain such splendid achievements.

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University of Copenhagen



Facsimile of the Horsburgh Catalogue title page

THE DEADLINE FOR THE NEXT ISSUE OF D-SN, TO BE PUBLISHED FROM THE NATIONAL OCEANOGRAPHIC CENTRE, SOUTHAMPTON, IS 1 MAY 2006

Contributions may be sent as e-mail attachments in Word (any version for Mac or pc), or RTF to:
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