

SERPENT science

www.serpentproject.com
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➔ SERPENT team changes

There have been several changes to the SERPENT team over the last few months. Our Project Coordinator, Dr Ian Hudson, left the project at the end of May to join our industry partner Transocean. Ian will still be involved in SERPENT, offering strong support from his new industry role.

Day to day management of the SERPENT project will now be carried out by Dr Daniel Jones and Dr Janne Kaariainen. Daniel has recently re-joined the SERPENT team after initially forging strong links to the project during his Ph.D. He will carry out research in benthic ecology, focussing on disturbance effects on seabed ecosystems. We would also like to welcome Dr Brian Bett to the project. Brian is an experienced benthic ecologist and key member of the DEEPSEAS group at the National Oceanography Centre, Southampton. He will support the project from this group, offering research and management advice. More details about Daniel and Brian's research interests can be found on the SERPENT website.

➔ Seal of approval!

May saw the Australian arm of the project, SEA SERPENT, conducting surveys at Woodside's Thylacine development in the Bass Strait. There are ten species of sea lions and seals recorded in Australian waters, and the cool waters of Bass Strait are home to several of them. Rigs seem to hold a special attraction to these animals, and it's usually possible to find 10-20 seals around a single rig. It is thought they are probably drawn to rigs in much in the same way that fish are attracted to the structures.



This mission taught us a lot about seal behaviour. Who would have thought that below 100 metres water depth seals would be a problem? Well certainly not us, at least when we were setting up our fish feeding preference experiments. Much to our surprise, juvenile Southern fur seals thought it a great game to lay on

the bottom and take swipes at the fish we were trying to study. So instead of studying fish feeding preferences, we now have information on how long seals can lay on the sea floor at 100 metres. We were also able to survey how individual and groups of seals interact with the ROV.

We really do not know much about what attracts seals to rigs or their interactions with ROVs. We would be very interested to hear about your experiences with seals or obtaining video of seals interacting with ROVs - contact Adele Pile at apile@bio.usyd.edu.au.

➔ Norway activities update



The final visits of the 2006 five-well fieldwork programme with project partner Statoil are taking place at the beginning of September. The five wells include Uranus, Edvarda, Morvin, Tornerose and Brugdan, in the

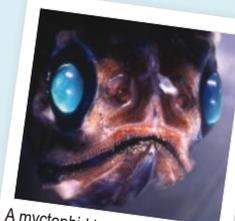
Barents, Norwegian and North seas. There are details of the visits so far, including image galleries and reports, in the active projects section on the SERPENT website. Re-visit the site often to see the latest updates - analysis and reports for the latest visits will be published soon!

➔ Deep-Sea Biology Symposium and Image Competition

The 11th International Deep-Sea Biology Symposium took place in July, hosted by the National Oceanography Centre in Southampton, UK. The highly successful symposium ran over five days and brought together more than 300 deep-sea biologists from around the globe to discuss new ideas, current research and to forge new links. SERPENT received ample coverage, providing images and footage for a special talks programme as well as a presentation by Dr Adele Pile, SEA SERPENT coordinator, and posters by our team and PhD students.

The team was also key to organising the concurrent BP Kongsberg Underwater Image Competition. The photos above illustrate the extremely high level of quality of entries, and full details of all the superb winning images and shortlists can be found at <http://www.serpentproject.com/imagecompentries.php>

Many thanks are due to SERPENT partners Transocean, BP and Kongsberg for sponsoring the symposium and the image competition.



A myctophid lanternfish onboard the *Malcolm Baldrige*, collected at 2000m in the Indian Ocean



Cirrate Octopus, Gulf of Mexico, DeSoto Canyon, 800m water depth. Michael Randall, USGS

Send us more...!



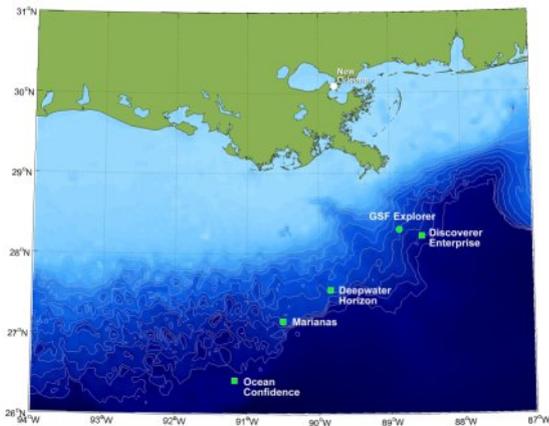
Do you have any questions, interesting stories, images or videos? Share them with us! Email lkm@noc.soton.ac.uk



A focus on... *Gulf of Mexico*

Dr Mark Benfield, Associate Professor at the Louisiana State University gives an overview of activities over the last few months in the Gulf of Mexico.

This has been a busy summer for the LSU component of SERPENT. Our current project, "Using Industrial, Deepwater, Remotely Operated Vehicles to Census Planktonic Organisms," which is funded by the National Oceanic and Atmospheric Administration's Office of Ocean Exploration, is designed to document the distributions and abundances of planktonic and nektonic organisms in the waters over the outer Continental Shelf and Continental Slope of the northern Gulf of Mexico. Our initial focus is on the Gulf but we're hoping to expand this to the west coast of Africa in the near future.



We are currently working with the ROV teams at these five BP-contracted semi-submersible drilling rigs and drillships. We've visited all but the GSF Explorer at least once and plan to continue periodic visits offshore to refine survey protocols.

So far we've developed a great working relationship with BP and their contracting ROV company Oceaneering. We hope to begin work with Chevron and Subsea 7 soon. Within BP, we have conducted research with the Oceaneering ROV groups at five semi-submersible drilling platforms and drillships: Marianas, Deepwater Horizon, Ocean Confidence, Discoverer Enterprise, and the GSF Explorer. As you can see from the map, these locations span a large extent of the Continental Slope waters off Louisiana. Terry Rooney at BP in Houston and Tony Butler at Oceaneering have been instrumental in moving our project forward and facilitating access to these amazing facilities.

Student involvement is an important aspect of our project and we were fortunate to partner with the Marine Advanced Technology Education (MATE) Center, who organized a summer student internship at our lab. This year's intern was Tanya Ribakoff from Eckerd College in St. Petersburg, Florida. Tanya is a senior (4th year) student who has a great marine

science background. She hit the ground running and within a week of arriving in Baton Rouge, she had completed helicopter underwater egress training, a Safe Gulf class, the BP HSE safety training and was flying offshore to the Deepwater Horizon semi-submersible! When Tanya wasn't offshore, she was in our lab pouring over the video footage from the ROVs. She's going to present her findings in the ROV session at the 2007 Underwater Intervention Conference in New Orleans.

The MATE Center was represented by Lani Clough, from Monterey California. Lani flew out and after a visit to Oceaneering, she too went through all the requisite safety training in time to join Tanya and Mark on a trip out to the Marianas. We were hosted by Doug Osborne from Oceaneering who helped us collect some amazing footage of midwater fishes and invertebrates.

We're starting to accumulate quite a lot of data on the distributions of marine plankton from our study sites. New observations continue to come in with each dive but we often see familiar organisms. We're fortunate to have specialized video processing software (VideoFocus) from Salient Stills, Inc. in Boston Massachusetts. This is the same software used by major media outlets to produce high-resolution composite images from lower resolution video imagery. They've provided us with a substantially discounted version of the software that enables us to combine information from adjacent video frames to improve the information content of the still images.

This fall we hope to expand the number of deepwater facilities that are working with us to include additional BP facilities and some Chevron sites. Our project will shortly be featured on the NOAA Ocean Exploration Website and we're assembling selected stills and video clips for the SERPENT Image Gallery. Funding from NOAA ends this fall so we're also going to be actively seeking continuation funding from other sources to keep this exciting project going!



L: Tanya made three trips to platforms to work with ROV operators and develop more effective survey protocols for planktonic organisms. Here she is with the ROV at the Transoceans' Deepwater Horizon.

R: Lani Clough (left) and Tanya Ribakoff (right) aboard the Marianas.