

SERPENT scene

www.serpentproject.com
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FRS Marine Laboratory

Kongsberg baited camera rig deployed with new LARS system

The North Sea SERPENT team in Aberdeen has participated in 2 sampling missions during summer 2008 at Nexen Inc.'s Buzzard platform in the North Sea. Our intention is to monitor interannual changes in fish assemblages and their behaviour in relation to the construction of the Buzzard platform. A combination of traditional fisheries survey methods such as trawling along with newer visual methods have been utilized. These methods include the opportunistic collection of ROV footage from pipelines and structural inspections and ad hoc Baited Underwater Camera (BUC) surveys both, inside and outside the 500m excluded area surrounding the platform.

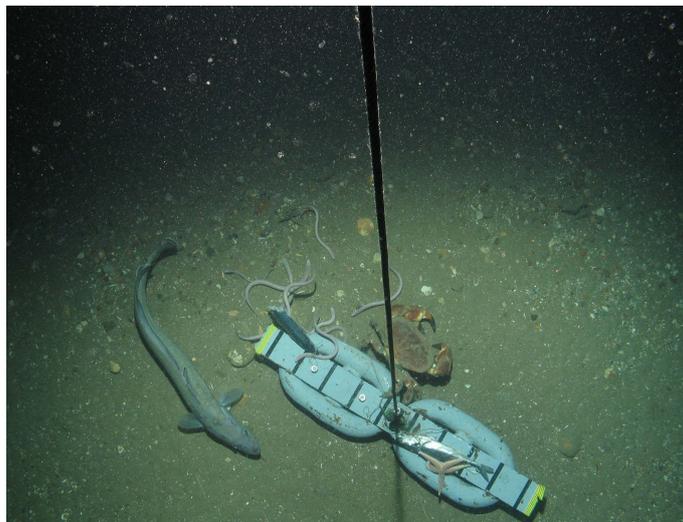
In April 2008 PhD student Iñigo Martinez and FRS Marine Laboratory technician Martin Burns visited the Buzzard Field for a week. ROV operators from Film-Ocean assembled their new LAunch and Recovery System (LARS) on the south side of the Quarters and Utilities deck of the platform that allowed a quick and easy deployment of the equipment. Severe weather conditions only permitted the launch of the Falcon ROV on one occasion and the strong tidal currents limited the ability of this tool. However, the FRS baited camera frame was deployed successfully on 5 occasions attracting scores of echinoderms (starfish and urchins), hermit crabs, flatfish (principally common dabs and few plaice), and our first pictures of a shoal of saithe. This species had previously been observed within the boundaries of the structure from

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Film-Ocean Lars (LAunch and Recovery System) deploying FRS Marine Laboratory baited camera frame fitted with a Kongsberg digital stills camera and a Nortek Aquadopp from the South side of the QU deck at Nexen operated Buzzard Platform.



Ling (*Molva molva*), hagfish (*Mixine glutinosa*), starfish and edible crab (*Cancer pagurus*) attracted by bait (500g of mackerel). Night deployment, depth: 96.4 m, distance to the platform: 232 m, scale in view: 1m. Photo: Iñigo Martinez.

ROV footage during inspections. Immediately following on from this mission equipment was transferred to the Buzzard stand-by vessel VOS Lismore and a survey of the wider area around the platform carried out with two baited camera systems inside and outside the 500m Excluded zone. Over the course of a month 22 deployments timed between 4 and 16 hours were achieved. Along with previous year's deployments, these data are being analyzed to explore the changes in fish assemblage, not only with distance to the platform but also in relation to time of day and neap and spring tides, etc. To quantify the impact of tidal patterns the baited camera is fitted with a current meter that collects depth, temperature, bearing, and speed of current during 30 seconds every minute. One of the cameras and a current meter was left at the Buzzard area on our last trip recording current data on the sea bed for one month. This will allow us to better understand the influence of current on the presence and behaviour of different fish species around the platform.

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Send us more. . . !



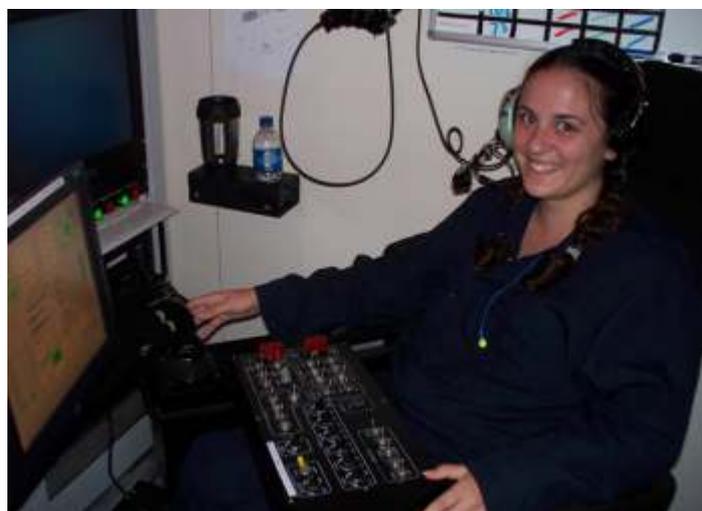
Do you have any questions, interesting stories, images or videos? Share them with us! Email r.curry@noc.soton.ac.uk

GOM SERPENT

Education and outreach are important components of the Gulf SERPENT Project. Over the summer, we were joined by a new summer undergraduate student intern – Ms. Ranae ‘Dani’ McHugh. Dani is a senior at the University of Maine at Machias. Our internship is coordinated by the Marine Advanced Technology Education (MATE) Center in California and Dani was one of over 100 applicants for the Gulf SERPENT Internship.

Dani arrived on June 16th and spent the next week going through all the requisite safety training. She and Marianne Alford (SERPENT Research Associate) successfully completed their Safe Gulf, Helicopter Underwater Egress Training, and BP Health, Safety, and Environment courses in the span of a week. During that period and in the following week, she also learned how to identify the different types of marine life we commonly observe, and how to process the video data so that it can be entered into a database.

On June 30, she and Mark Benfield flew out to BP’s Thunder Horse rig to spend three days working with the two Saipem-America ROVs on that facility. Thunder Horse is the largest semi-submersible rig in the world and it was a great place for Dani to start her project. We had fantastic cooperation from everyone aboard Thunder Horse. Both ROVs were placed at our disposal for the duration of the visit. It’s not every day that an undergraduate marine science student is given resources like these!



Dani McHugh, GOM SERPENT’s keen new summer undergraduate student intern.



The remarkable *Grimalditeuthis bonplandi* using its fish-like lure to attract its unsuspecting prey.

We made maximum use of our time. After working together with the crew of the 150 hp Innovator 15 ROV, Dani and I split up and worked simultaneously with both Innovator 15 and the 250 hp Innovator 19 ROV. We managed to collect some outstanding data and added a number of new observations to our database. Notable finds were two observations of a munopside isopod – strange blood-red, spider-like crustaceans that appear to walk through the water, incredible footage of *Grimalditeuthis bonplandi* – a deep sea squid that uses a remarkable lure which mimics a fish, and observations of yellowfin tuna down at 1000 feet apparently foraging on squid.

Dani returned to Thunder Horse one week later where she added even more data to our growing pile of DVDs. After that she visited the Deepwater Horizon and the Developmental Driller II (DD II). Over the six weeks that she was with us, she managed to make four trips offshore and added two new rigs (Deepwater Horizon and the DDII) to our partner sites.

Dani is now back in Maine pursuing her university studies but we look forward to having her visit again in January when she’ll present a summary of her internship at the Underwater Intervention Conference in New Orleans. In the meantime, we’ll soon be posting an announcement for our next summer internship on the MATE website (www.marinetech.org).

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collaboration



innovation



research



education

SERPENT presents to Chevron

Continuing a successful collaboration with international oil company and SERPENT project partner Chevron, Dr Andrew Gates and Rob Curry of SERPENT were invited to talk at the recent Chevron Environment week. Andrew and Rob visited Chevron House, Chevron's innovative Aberdeen facility, and headquarters for Chevron Upstream Europe.

Chevron takes its environmental responsibilities very seriously. As an example it has built biodiversity into its core Operational Excellence Management System, and is equally committed to its ongoing collaboration with the SERPENT project.

Andrew and Rob put on a very well received presentation highlighting the biodiversity of life in the deep Faroe-Shetland Channel. The presentation looked in depth at the SERPENT research undertaken during Andrew's visits to the Transocean Rather exploration rig last year at the Rosebank prospect. Rob spoke about the outreach opportunities generated by collaboration with SERPENT including showing a slideshow and video of the surprising diversity of creatures seen at the location. The presentation was filmed for distribution throughout the Chevron organisation to highlight environmental responsibility.

The slideshow was so well received that the Environmental team requested a copy of it to be shown on in-house screens at Chevron House.



Delicate tendrils of a pair of hydroids *Tubularia* sp. streaming in the underwater current of the Faroe-Shetland Channel. Note the small amphipods on the stalk.

Southampton Boat Show 12 – 18 September 2008

SERPENT will be at the Southampton Boat Show again this year. We will be having two displays this time, one on the National Oceanography Centre stand and one on board the NOC research vessel Callista which will be berthed at the show Saturday 13th through to Wednesday 17th September. The vessel will be on one of the feature berths, showcasing a range of NOCS science and facilities. The displays will show specimens of deep-sea creatures, videos and presentations about the SERPENT project as well as our recent discoveries at Rosebank in the Faroe-Shetland channel in collaboration with Chevron, a hands-on chance to experience real bioluminescent organisms as well as an opportunity to have a go at piloting a mini ROV in our aquarium tank!



Upcoming developments

Google Earth

The SERPENT web team are working hard on presenting the SERPENT archive materials in a format that can be viewed on Google Earth, so look out for announcements about that in the next newsletter.



SERPENT card game



Following the great success and popularity of the SERPENT Deep Sea Trumps games we distributed at the Tunza Conference in June this year, we are now working on a National Oceanography Centre (NOC) set which we are hoping to distribute through the SERPENT website and national outlets such as the Natural History Museum shop.

Look out for our next Newsletter which will be out in December 2008 Bye for now!



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