

Robot brings results from the depths

An underwater robot retrieved more than a quarter of a million images totalling 1.25 terabytes of data from the ocean floor off Eyre Peninsula during last week's scientific expedition led by the Department for Environment and Heritage (DEH).

DEH was one of two South Australian groups to win access to the Integrated Marine Observing System's (IMOS) nation-wide pool of resources, giving DEH marine scientists the extraordinary opportunity to use the Autonomous Underwater Vehicle (AUV).

A team of robotics experts from the University of Sydney joined the DEH marine scientists for the six-day trip on board the SARDI marine research vessel *Ngerin*.

The AUV was deployed in 10 locations around Reevesby, Partney, Spillsby, Kirkby, Stickney and Langton Islands and Dangerous Reef.

DEH's Coast and Marine Conservation Manager Chris Thomas said using the AUV allowed the scientists to collect data at a much faster rate than using normal survey techniques.

"It allows us to cover the same areas in less than a quarter of the time it would take with our usual tactics and survey areas that are outside our usual depth range," Mr Thomas said.

"Using the AUV also means there are many less dangers and difficulties than sending divers into the water, particularly in areas like Dangerous Reef which is known for its high shark population.

"During this expedition the AUV took two high resolution photographs every second and travelled about 2m above the sea floor.

"These images provide continual coverage of the ocean floor which can be used to answer a range of research questions.

"The robotics engineers will collate the data and create three dimensional mosaics which we will use to help create habitat maps of the sea floor," Mr Thomas said.

These maps will help inform the design of South Australia's 19 marine parks, several of which will be located in the Spencer Gulf.

The AUV forms part of the larger \$6.4 million Southern Australia IMOS which is being run by the South Australian Research and Development Institute (SARDI) and Flinders University.

Further information about the Government's commitment to caring for the marine environment is available from the DEH website

<http://www.environment.sa.gov.au/coasts.html> or by phoning the DEH Coast and Marine Conservation Branch on 8124 4900.

Images of the robot, and others taken from the robot, are available by contacting Angela Gray on 8124 4909 or Gray.Angela@saugov.sa.gov.au

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