

MEDIA RELEASE

NEWS FROM THE UNIVERSITY OF TASMANIA

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ATTENTION: Chiefs of Staff, News Directors



Satellite-tagged Weddell seals to help reveal secrets of the ocean

A team of University of Tasmania researchers will depart tomorrow (Wednesday 30 January) to begin satellite tagging a series of Weddell seals in Antarctica as part of an international program to learn more about the foraging patterns of the species.

The research - which is part of the global Marine Mammal Exploration of the Oceans Pole to Pole (MEOP) program – will also collect invaluable oceanographic data that is usually inaccessible to scientists and which will be used by CSIRO as part of important climate and ocean modelling.

Dr Mark Hindell and post graduate researcher Ms Virginia Andrews-Goff, from the School of Zoology, will sail on the Antarctic support vessel L’Astrolabe and spend the next month based at the French Antarctic Base, Dumont D’Urville, from where they will work with French scientists to tag at least eight Weddell seals with state-of-the-art satellite trackers.

The trackers, valued at \$15,000 each, are glued to the head of the seal and will collect data for the next eight to nine months on the seals’ movement patterns, behaviour and habitat utilisation, before the tags drop off during the moulting season.

In an international collaboration, raw data from the trackers will be collected by the French ARGOS Agency and then decoded by the Sea Mammal Research Unit at St Andrews University, Scotland, before being transferred to UTAS for analysis – all within a few hours.

Dr Hindell said the research followed a separate project involving Elephant seals, for which preliminary results were released in August last year, but that the Weddell seals offered an opportunity to probe even deeper into the southern pack ice.

“Given Weddell seals travel much further south than Elephant seals, we have a unique opportunity to explore deep into the south,” he said.

“Weddell seals are also known to dive in ice-filled waters to depths in excess of 800m, so the tags will also provide ongoing and extensive oceanographic information that is normally inaccessible to researchers because of the logistics and costs involved,” Dr Hindell said.

Dr Hindell said the research was particularly timely given the predictions on the impact of climate change on Antarctica and concerns surrounding increasing fishing and tourism activity in the area.

MEOP, which began this year, is part of the International Polar Year, which runs until March 2009, and involves partners from more than seven countries, including Norway, the UK, South Africa, Greenland and Brazil.

The Australian MEOP consortium includes UTAS, CSIRO and the Australian Antarctic Division.

* Note: Weddell is pronounced “wed-al” like “medal”.

FAST FACTS ON THE PROJECT ARE ATTACHED BELOW

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WEDDELL SEAL TAGGING FAST FACTS:

- The research aims to gain an understanding of the winter foraging pattern of Weddell seals utilising satellite tracking and dive behaviour data.
- The data is also used by CSIRO (and others) to gather oceanographic data from under the Antarctic pack ice which has previously been inaccessible. This data is used as part of climate change monitoring.
- It is part of the MEOP project (Marine Mammal Exploration of the Oceans – Pole to Pole) which began this year and involves marine mammal studies in the Arctic and Antarctica.
- MEOP is part of the International Polar Year, which actually runs for two years, from March 07 to March 09.
- International connections: the Weddell seal team will work from the French Antarctic base, Dumont d’Urville. Raw data is collected by French ARGOS, processed or decoded by Sea Mammal Research Unit at St Andrews University, Scotland, and then sent to UTAS.
- Seals will be monitored for 8-9 months at up to 10 locations per day.
- The tags record the position of the seal and monitor its diving cycle with a pressure sensor and record water temperature and salinity – data which is uploaded to satellite while they are on the surface of the water.
- Tags drop off as part of the moulting season and are applied shortly after the moulting season. The tags are retrieved when the seals return to the same beach and shed their fur, which can be up to 10 months later.
- Each tag costs \$15,000. The cost has been funded by CSIRO and the Australian Research Council.

- The study is aimed at discovering how animals at the top of the Southern Ocean food chain respond to changes in the ocean. This study can guide the development of strategies for the management of living resources in the Southern Ocean and predictions of how animals in that area will react to climate change.
- Weddell seals can dive to 800 metres but prefer depths of 200-500 metres.