Government of Western Australia

Media Statement

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Roebuck Bay teeming with biodiversity

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A major project to record and map the biodiversity of the world-renowned Roebuck Bay has listed about 185 species, 26 of which are new to the Bay, Environment Minister Mark McGowan announced today.

Mr McGowan said the comprehensive survey focused on the northern shores of the Bay - an internationally important feeding and roosting site for about 150,000 migratory shorebirds.

"A team of 38 people from seven countries visited more than 500 sampling sites, taking samples to extract and identify the great diversity of invertebrate animals that call the mudflats home," he said.

"During the survey more than 12,000 individual animals were identified and measured. About 185 species were recorded of which 26 are new to Roebuck Bay.

"This is very exciting and demonstrates the rich biodiversity of our State."

Some of the species discovered during this expedition and not recorded on earlier surveys included:

- a small bivalve (shallow water mollusc) from the family Galeommatidae;
- a small transparent Skeleton Shrimp from the sub-order Caprellidea;
- a new large snail from the genus Nassarius; and
- two species of polychaete worms.

Mr McGowan said scientists had also noted a new kind of large snail and long-armed brittle stars (closely related to starfish) at a number of sampling stations across the flats.

"Long-armed brittle stars are wonderfully fragile creatures that live among the soft sediments of the bay and trap particulate food items with their long arms," he said.

"The food is passed down to their mouths using thousands of fine hair-like features on their arms.

"They are an important part of the ecology of soft sediment bays and work with many other 'bio-turbating' organisms which help to re-circulate sediments to maintain airspaces at the bottom of the bay."

Mr McGowan said there were a number of other species thought to be previously unrecorded, including solitary ascidians (comprising sea squirts, sea sponges and algae) and small sentinel crabs (Macrophthalmus).

A large spider crab, paranaxia serpulifera, although not a rare beast and well known to traditional owners, was also recorded as part of the survey looking into shorebird food sources living in the intertidal zones of the bay.

Kimberley MLA Carol Martin said the information gained through the survey would help preserve the biodiversity of the area for the future.

"Roebuck Bay is very special to the local community and shorebirds alike," Mrs Martin said.

"It is one of a small number of intertidal mudflats world-wide which are visited by such a large number of different shorebirds. In fact, it is believed to be the world's richest intertidal mudflat.

"Sandpipers, plovers and curlews are among the species of birds which visit the bay after nesting in areas in the far northern hemisphere, including the Mongolian steppes and the Arctic Circle.

"The diversity and abundance of animals inhabiting the mudflats are an important source of food for these migratory birds, so good management of this important area, in balance with increasing human usage, is essential."

Mr McGowan said the Roebuck Bay Invertebrate and Bird Mapping project was a major collaborative effort involving the Department of Environment and Conservation, WA Museum, Flinders University, Charles SturtUniversity, international scientists from the Netherlands, United States of America and China, the Broome community and international and Australian volunteers.

"This project has provided vital information on the ecology of the intertidal flats at the Bay," he said.

"It has been a great success and demonstrates the benefits of working with other overseas institutions such as the Royal Netherlands Institute for Sea Research and Washington Central University."