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MEDIA RELEASE

MAXINE'S SATELLITE SECRETS REVEALED

After over a year of silence, staff of the Two Oceans Aquarium and AfriOceans Conservation Alliance were thrilled to receive more news of Maxine, the ragged-tooth shark that was released from the Aquarium on 18 March 2004. Maxine is the iconic ambassador for the Save our Seas Foundation M-Sea Programme which is an AfriOceans Conservation Alliance (AOCA) initiative.

Information downloaded from one of her two satellite tags in July last year revealed that Maxine was located south of Cape Seal near Plettenberg Bay in water approximately 97m deep. In four months she had travelled 298km from the point of her release off Saxon Reef just south of Arniston. Recently received satellite information gave Maxine's position to be 11km east of the mouth of the Sundays River in Algoa Bay. This means she travelled approximately 570km in total from the point of her release. The satellite information further revealed that Maxine spent most of her time in water less than 10m deep and in temperatures ranging from 13 – 20°C. "We were ecstatic to receive this new information about Maxine – she is living up to her icon status! For the first time ever in South Africa we have been able to follow the journey of a ragged-tooth shark and receive real and accurate information about its movements along our coast, particularly along the south coast," says Michael Farquhar, Curator of the Two Oceans Aquarium. According to Farquhar, the ability to track marine animals via satellite is a major scientific breakthrough and is being applied by leading scientists in marine research around the world. "At this stage, however, satellite tags are being used on only two species of sharks in South Africa – the great white and the ragged-tooth. Together with the Save our Seas Foundation, AOCA and South African shark experts, we are thrilled to be at the forefront of research on ragged-tooth sharks using satellite technology," says Farquhar.

Maxine is not the only ragged-tooth shark to be sharing her satellite secrets. Information was also recently received from satellite tags which were fitted to Val, the second shark to be released by the Aquarium off Saxon Reef on 4 April 2005, and Sam, a wild ragged-tooth shark, which was tagged at the same time as Val. Although both tags surfaced on schedule, the data on Val's tag was unfortunately corrupt. Sam's tag, however, delivered perfect data and positioned her 5.7km east of the mouth of Mzimvubu River (just off Port St Johns) at a depth of 60m. In four months Sam had swum 993km from the Struisbaai area where she was tagged.

Further information indicates that Sam swam between depths of less than 10m to approximately 100m in temperatures ranging from 16 to 20°C. "This information is extremely valuable," says Lesley Rochat, Director of AfriOceans Conservation Alliance. "Although there are records of ragged-tooth sharks being caught in deep waters, these sharks are generally considered to be an inshore species. Satellite information has provided us with real data showing us that these animals do in fact venture into deeper waters. With additional studies in the future we will be able to move away from speculation and assumptions and get to know the real facts behind the lifestyles of these ecologically important coastal predators," adds Rochat.

Although satellite tracking is an expensive method of investigating the behaviour of marine animals, it has opened a giant, crystal-clear window into the lives of many creatures including penguins (remember Peter, Pamela and Percy?), sunfishes, turtles, tuna, dolphins, whales, seals and sharks to name but a few.

Two types of satellite tag are used depending on the lifestyle of the study animal. Real-time satellite tags are used in studies on animals which spend significant amounts of time at the surface or surface regularly for lengthy periods. This type of tag was used to track the journey of Peter and his cohorts as well as on Nicole, the great white shark which travelled from South Africa to Australia and back. The advantage of these tags is that they submit information to the satellite regularly so that scientists can track their movements with relative ease.

Pop-up Archival Transmitting satellite tags (PAT) are used on those animals which generally spend most of their time at depths, but occasionally visit the surface. PAT tags were used on Maxine, Val and Sam. These tags were programmed to surface on a particular date and transmit their information to a satellite which then downloaded the information to an organisation in France where it was collated and analysed and then sent to South Africa!

Satellite tagging allows scientists to collect more and accurate information on a specific animal in a very short time. "In this way we are able to gain greater knowledge and deeper understanding about the biology and behaviour of animals and thus will be in a far better position to protect and conserve them in the future," says Rochat.

The Save Our Seas Foundation M-Sea Programme hopes to raise further funds for the tagging and releasing of the remaining three large sharks in the Two Oceans Aquarium over the next few years. At the same time as these animals are tagged and released, the Two Oceans Aquarium will raise funds to tag wild ragged-tooth sharks so that the behaviour of released captive animals can be compared to that of

wild ragged-tooth sharks. In this way it is hoped that new insights will be gained into the behaviour of animals about which very little is known.

Members of the public who are interested in reading more about the Save our Seas Foundation M-Sea Programme and the satellite tagging studies should log on to the AfriOceans Conservation Alliance website www.aoca.org.za.

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