



SCIENTIFIC MEETING

## SHARK BIOLOGY AND CONSERVATION

Tuesday, 11 March 2008

The Meeting Rooms, The Zoological Society of London, Regent's Park, London NW1 4RY

**Chair: Dr Alex D. Rogers**

**Senior Research Fellow, Institute of Zoology, Zoological Society of London**

### **Threatening or threatened? The conservation status of sharks**

*Sarah Fowler, Co-chair, IUCN SSC Shark Specialist Group; President, European Elasmobranch Association; Trustee, Shark Trust*

Despite a growing interest in marine conservation, public and media views of sharks are frequently coloured by the 1970's classic horror film 'JAWS'. Sharks are portrayed as terrifying, menacing, man-eating machines potentially threatening anyone venturing too close to the water. Today, however, as the first global assessment of the threatened status of sharks nears completion, we know that a significant proportion of shark stocks are so seriously depleted that they qualify for inclusion on the World Conservation Union's *Red List of Threatened Species*. This talk will present some of the interim results of the Shark Specialist Group's 2008 Global Shark Red List Assessment, with particular emphasis on Northeast Atlantic, Mediterranean, pelagic and migratory stocks.

The largest marine predators tend to occupy a position at the top of the food web with few natural enemies. Their longevity, slow growth and low fecundity means that they cannot reproduce fast enough to compensate for mortality in target and bycatch fisheries. Since the majority of shark fisheries are unregulated, huge stock declines can rapidly take place. Recovery of stocks, if fishing pressure lifts, will take many decades. This has serious implications not only for the sharks but also for the stability of entire marine ecosystems. Europe has a particular responsibility for managing shark fisheries worldwide. The proposed development of a Community Plan of Action for Sharks this year presents the long-overdue opportunity to introduce sustainable management of target and bycatch fisheries, recovery plans for depleted stocks and strict protection for threatened species.

#### **Further Information:**

[www.flmnh.ufl.edu/fish/organizations/ssg/ssg.htm](http://www.flmnh.ufl.edu/fish/organizations/ssg/ssg.htm) (soon to be replaced by [www.iucnssg.org](http://www.iucnssg.org))

[www.iucnredlist.org](http://www.iucnredlist.org)

[www.iucn.org/places/medoffice/documentos/2007/11/med\\_shark\\_rep\\_en.pdf](http://www.iucn.org/places/medoffice/documentos/2007/11/med_shark_rep_en.pdf)[www.sharkalliance.org](http://www.sharkalliance.org)

[www.iucn.org/themes/ssc/](http://www.iucn.org/themes/ssc/)

[www.sharktrust.org](http://www.sharktrust.org)

## **Tracking sharks with electronic tags: revealing movements, behaviour and implications for conservation**

*Dr David W. Sims, Senior Research Fellow, Marine Biological Association of the UK, Plymouth, UK*

Until recently the movements and behaviour of large sharks were unknown. The application of sophisticated data-logging and satellite-transmitter technology for tracking shark migrations and habitat preferences is nothing short of a revolution in marine ecology. In this lecture the main technological advances will be described and examples of fascinating new insights into the secretive lives of sharks will be highlighted, including migrations across ocean basins and dives to over 1 km. It is clear that electronic tagging is revealing complex behaviours and distribution patterns of sharks, information that is highly relevant to management and conservation of exploited populations, at a time when human fisheries show no sign of scaling back.

## **Whale sharks – behaviour and ecology in the Indian Ocean in comparison with other large shark species**

*Dr Mauvis Gore, Marine Conservation International, West Lothian, UK & University of London Marine Biological Station, Isle of Cumbrae, UK and David Rowat, Marine Conservation Society Seychelles, Mahe, Seychelles & University of London Marine Biological Station, Isle of Cumbrae, UK*

Whale and basking sharks are specialist planktivores occurring in tropical and temperate waters, respectively. This lecture will focus on recent studies of the behavior and ecology of whale sharks from the Indian Ocean. The talk will also describe comparative work on the basking shark in Scotland and highlight similarities with other large, predatory shark species.

Work on the whale shark in the Seychelles, using photo-identification and conventional tagging, has shown that the population is highly transient. Satellite tagging results have shown that the whale sharks undertake oceanic migration but apparently as individuals. Although the whale shark often remains near to the surface, they have been recorded making deep dives when they reach cold waters. The whale sharks spend over 90% of their time in 25–35°C water. Satellite and conventional tags have also been used on large predatory shark species, notably the white and tiger sharks. Results have shown that they too can migrate long distances across oceans.