

Seaweeek is a public campaign organised annually by the Marine Education Society of Australasia (MESA). Through Seaweeek, MESA aims to focus community awareness, provide information and encourage an appreciation of the sea. Information concerning MESA Seaweeek 2005 can be found at www.mesa.edu.au/seaweeek2005

What: The overall theme for Seaweeek 2005 is **Save Our Sharks.**

When: Seaweeek 2005 runs from March 6 to 13.

Where: Schools and community groups all over Australia celebrate Seaweeek.

How: Go to the Seaweeek section of the MESA web site to download free educational resources including: schools-activities booklet; a student book list (primary and secondary); list of shark web site addresses; shark bibliography; information sheets (focusing on the diversity, biology and ecology of sharks and rays; threats, vulnerability and status of shark species; commercial and recreational fishing for sharks; shark attacks—safe swimming and diving guidelines; and the cultural significance of sharks); and profiles of Australian shark biologists.

- Join in community events/activities in your State that are listed on the MESA Seaweeek 2005 web site, or organise your own community events/activities.
- Display Seaweeek posters and stickers at your school or community centre (note: posters and stickers will be mailed to all schools in Australia and will also be available from MESA State delegates).
- Contact the MESA Secretariat, or your local MESA State delegate, for further information. Contact details are listed on the MESA web site www.mesa.edu.au

MESA is a non-profit association that aims to bring together those interested in the study and enjoyment of the sea. MESA has individual members and regional branches in every State in Australia, as well as international links to similar organisations.

Background information

There is worldwide concern over the increase of shark catches and the consequences this has for some shark species in several areas of the world's oceans. In response to this concern, the international community, through the Food and Agriculture Organisation (FAO) of the United Nations, developed an International Plan of Action for the Conservation and Management of Sharks. As a member nation to the FAO, Australia developed its own National Plan of Action for the Conservation and Management of Sharks (Shark-plan) through the Australian Government Department of Agriculture, Fisheries and Forestry, which was launched by Senator the Hon. Ian Macdonald in May 2004. One of the actions identified in the Shark-plan is to undertake educational activities to increase awareness and attitudinal change in relation to shark conservation and management issues. MESA is pleased to contribute to this education and awareness-raising campaign through Seaweeek 2005.



Ron Taylor diving with great hammerhead sharks, *Sphyrna mokarran* (© Ron and Valerie Taylor)



Seaweeek 2005 themes

Theme 1. Sharks are an important part of marine ecosystems.

Our current understanding suggests that the role of higher-level predators is important in maintaining the marine ecosystem. All sharks are predators although some shark species are not at the top of the food chain. Within the Australian species the whale shark and the megamouth shark sit at one extreme with a large zooplankton component to their diet. At the other extreme sit the great white shark and the broadnose sevengill shark that feed on a range of invertebrates and vertebrates, and include a high proportion of mammals in their diet.

Ideas for schools: Develop a food chain for different species of sharks. Include the other species that make up the marine ecosystem and draw arrows that show how the energy flows from one species to another. Also, see the relevant information sheet on the MESA Seaweeek 2005 web site compiled by Mike Bennett and Simon Pierce, with links to the schools-activities booklet.

Theme 2. There is a wide variety of different types of sharks, and their relatives the rays and chimaeras, in Australia.

The key feature that distinguishes Chondrichthyans—sharks, rays and chimaeras—from the bony fishes and other higher vertebrates (amphibians, reptiles, birds and mammals) is that the skeletons of Chondrichthyans are made of cartilage. There are nearly 400 living species of sharks, nearly 600 living species of rays, and 33 living species of chimaeras worldwide. Approximately 300 species of Chondrichthyans have been discovered in Australian waters. More species are likely to be discovered as the deep-ocean waters are better explored.

Ideas for schools: Collect pictures of different sharks, rays and chimaeras from the Internet. These could be used to make up a collage. Individual students could choose species and present a pictorial report of their research on it. Also, see the relevant information sheets on the MESA Seaweeek 2005 web site compiled by Terence Walker, with links to the schools-activities booklet.

Theme 3. Sharks are generally long-lived, late maturing, have low fecundity and often have small population sizes. Consequently, such species are particularly susceptible to overfishing and are slow to recover if overfished.

Most sharks have a low reproductive potential attributed to their slow growth and delayed maturation, long reproductive cycles and low fecundity (a small number of offspring). These aspects of their biology also mean that shark populations are slow to recover if they are overfished.

Some of the commercially important shark species give birth to their young in shallow coastal waters. The young remain in these areas (nurseries) for months or years. These sharks are very vulnerable to modern fishing operations. Sharks are also caught in high-seas longline fisheries. Even so, some valuable and biologically sustainable fisheries for sharks do exist. Such fisheries are closely monitored by scientists. Importantly, the Australian Government has recently implemented its Shark-plan as its response to the International Plan of Action for the Conservation and Management of Sharks. This should help to ensure the long-term sustainable use of Australia's shark populations.

Ideas for schools: Find out about what species of sharks are sold in your local fish shop. Investigate how these sharks are caught and what is done by fisheries-management agencies to protect species from overfishing. Also, see the relevant information sheets on the MESA Seaweeek 2005 web site compiled by Terence Walker, Julian Pepperell and Kevin McLoughlin, with links to the schools-activities booklet.



Win a Family Pass to Sea World's Shark Bay (Queensland), and a Shark Bay Snorkel Adventure for yourself, simply by designing a piece of media highlighting key issues relating to the conservation and management of sharks in your region. See www.mesa.edu.au/seaweeek2005 to find details on how to enter.

Theme 4. Some shark species are threatened by human activities, notably the great white, grey nurse and whale sharks.

Some shark species are threatened (notably the great white, grey nurse and whale sharks) and require special management. Human activities that may impact negatively on sharks include: commercial fishing (e.g., overfishing; bycatch on longlines or in nets; entanglement in lost/discarded fishing gear); recreational fishing (e.g., spear fishing and game fishing; entanglement in lost/discarded fishing gear); trade in shark products (i.e., fins, jaws and teeth); ecotourism (e.g., potential disturbance of sharks due to harassment by divers and vessels when people do not follow good/approved codes of conduct); beach netting as a protective measure for swimmers and surfers; vessel contact (e.g., whale sharks are slow moving and particularly susceptible to boat strike); and loss of suitable habitat caused by disturbance or pollution.

Ideas for schools: Find out which shark species are threatened around the world, and what is being done to assist the recovery of threatened shark species in Australia. Also, see the relevant information sheets on the MESA Seaweeek 2005 web site compiled by Brad Norman, with links to the schools-activities booklet.

Theme 5. While most sharks and their relatives are not aggressive towards humans there are some strategies you can adopt to reduce the risk of shark attack when swimming or diving.

In the last 50 years, there have been only 61 human fatalities (1.22 per year) in Australian waters from shark attack. While most sharks and their relatives are not aggressive towards humans there are some strategies you can adopt to reduce the risk of shark attack when swimming or diving. These strategies are listed on the MESA Seaweeek 2005 web site. To learn more about shark attacks go to the Australian Shark Attack File web site <http://www.zoo.nsw.gov.au/content/view.asp?id=126>

Ideas for schools: Prepare a poster that encourages people to take steps to avoid sharks when swimming. Share these ideas with your local surf life saving club. Also, see the relevant information sheet on the MESA Seaweeek 2005 web site compiled by John West, with links to the schools-activities booklet.

Theme 6: Sharks and their relatives are important to many cultures including to Indigenous Australians.

For Aboriginal societies, whose economies were traditionally grounded on the hunting and gathering of wild foods, animal symbols were naturally based on wild animal species. For many coastal Aboriginal peoples, certain sharks and rays have positive associations and symbolic value. Aboriginal groups recognise a wide diversity of species and they are able to observe them in their habitat. While they recognise that some species such as tiger sharks and bull sharks are potentially dangerous at certain sizes, they also know that most species are harmless to mankind. They view them as powerful and worthy of respect, just as Westerners see eagles and lions as models of independence, bravery, and might.

Ideas for schools: Invite local indigenous people or islanders to share some of their stories about sharks with your school. Research stories in the library or on the Internet. Also, see the relevant information sheet on the MESA Seaweeek 2005 web site compiled by Matthew McDavitt, with links to the schools-activities booklet.



Sharks view of board rider (© Ron and Valerie Taylor)



Ron Taylor diving with an oceanic whitetip shark, *Carcharhinus longimanus* (© Ron and Valerie Taylor)



Ron Taylor diving with a whale shark, *Rhincodon typus* (© Ron and Valerie Taylor)

Sponsors and Supporters

The following individuals/organisations are Seaweeek 2005 sponsors and supporters: Natural Heritage Trust; Fisheries Resources Research Fund; the Bureau of Rural Sciences; Sea World; the Australian Marine Conservation Society; the Seaweeek Working Party (Kerrie Trees, Peter Biro, Carolyn Stewardson, Jacqui Foster, Jody Plecas, Mark Rodrigue, Harry Breidahl and Tara Ellard); and MESA State Delegates (NSW—Michael O'Connor; Vic.—Brooke Connor and Peter Johnstone; Qld—Sheree Bell; WA—Melinda Wild; SA—Alex Gaut; and Tas.—Jacqui Foster).

While the Marine Education Society of Australasia (MESA) is pleased to register and promote community and school activities that take place during Seaweeek, unless the activities are being carried out by financial MESA members and the activities have been approved in writing by the Seaweeek Coordinator, then MESA shall not accept liability for (1) personal injury to; (2) damage to property owned by; or (3) injury to animals owned by; any person participating in any performance or activity, including, but not limited to, participation in any events during Seaweeek. Organisations or individuals seeking to register Seaweeek events through the MESA web site at www.mesa.edu.au/seaweeek2005 or by any other means, are hereby advised that they must undertake to provide their own public liability insurance for activities for which they are responsible.



Seaweek 2005

March 6 to 13

- diversity, biology and ecology of sharks and rays
- threats, vulnerability and status of shark species
- safe swimming and diving guidelines

