

Grand Manan & White Head

Sharks, Skates, Rays & Chimaeras

The Bay of Fundy waters contain many species of sharks, skates and rays despite the misconception that the waters are too cold for these cartilaginous fish. Many are only spring to fall visitors but some live year-round. Chimaeras, another cartilaginous fish, are rarely reported.

Common Sharks:

**Spiny Dogfish (*Squalus acanthias*)** - The most common shark in the Bay of Fundy, this small schooling shark(70-100cm) is frequently caught during the summer but unfortunately are not usually sold. A processing plant for dogfish was operated at Ingalls Head on Grand Manan for a few years until it caught fire from a lightening strike. The plant was not rebuilt. Spiny dogfish is marketed as "rock shark", "rock cod" or "rock salmon" and is often eaten in Europe and used for English fish and chips. Dogfish are also dissected in science classes and a market for biological supplies exists. It is probably the most written about shark in the world because of the latter, its abundance and the negative effect on commercial fisheries.

Photo modified from *Sharks*. L Campagno, C Simpfendorfer, JE McCosker, K Holland, C Lowe, B Wetherbee, A Bush, and C Meyer. Readers Digest Series. 1998. Weldon Owen Pty Ltd., Pleasantville, NY.



**Thresher Shark (*Alopias vulpinus*)** - Summer visitors, these medium sized sharks (3.3 to 5.5 m or 10 to 18') are easily recognized because of their long tail, often the same length as the body. Usually eating schooling fish such as herring and mackerel, or squid and crustaceans, they use their long tail to circle the fish into a tight ball. There are stories of threshers attacking whales but these reports are difficult to verify.

Photo modified from *Sharks and Rays*. TC Tricas, K Deacon, P Last, JE McCosker, TI Walker, L Taylor. 1997. Nature Company Guides, Time Life Book Series. Weldon Owen Pty Ltd., San Francisco.



**Basking Shark (*Cetorhinus maximus*)** - The second largest shark (over 10m or 33'), these slow moving sharks filter feeding on zooplankton by skimming the small organisms from the water with modified gill structures. Their gill slits almost encircled their head and they can be seen swimming just beneath the surface with their mouths agape, filter feeding. These sharks are locally called "mud sharks". Basking sharks come to the surface on calm days, and swim

**Great White Shark (*Carcharodon carcharias*)** - These large "man-eaters" are usually found in the Bay of Fundy between April and November, their presence noted when caught in fishing gear. The most notable of these occurred in mid-June, 1930, in a herring weir off White Head Island. If authenticated, it would be the largest great white ever reported (11.28m or 37'), however, no photographs or verification of the length exists, although a tooth was donated to the Royal

slowly with the top of their dorsal fin exposed, hence the name "basking". They are proficient at breaching - leaping clear of the water as whales do, although an explanation for this behaviour in basking sharks is not readily known.

Photo modified from *Sharks, History and Biology of the Lords of the Sea*. A. Mojetta. 1997. Swan Hill Press.

Ontario Museum. The oil from the liver amounted to 955 litres (210 gal) and the stomach contained two and one-half seals. The diet of great whites is varied, ranging from mackerel, hake, salmon and tuna to other sharks, seabirds, marine mammals and sea turtles. All great whites examined from the Bay have had harbour porpoises or harbour seals in their stomachs. Numbers of sharks is always difficult to determine and may vary greatly from year to year. There are no recorded "shark attacks" on swimmers in the Bay.

Photo modified from *Sharks*. L Campagno, C Simpfendorfer, JE McCosker, K Holland, C Lowe, B Wetherbee, A Bush, and C Meyer. 1998 Readers Digest Series. Weldon Owen Pty Ltd., Pleasantville, NY



**Porbeagle (*Lamna nasus*)** - Caught in fishing gear incidentally, this medium sized shark (max. length 3m or 10') is usually marketed as "Mako". Porbeagles eat mostly herring, mackerel and squid, small cod, hake and cusk. They may occur year round but are most common from spring to fall.

### Occasional or Rarely Occurring Sharks:

**Shortfin Mako (*Isurus oxyrinchus*)**

**Sand Tiger Shark (*Odontaspis taurus*)**

Photo modified from *Sharks and Rays*. TC Tricas, K Deacon, P Last, JE McCosker, TI Walker, L Taylor. 1997. Nature Company Guides, Time Life Book Series. Weldon Owen Pty Ltd, San Francisco.









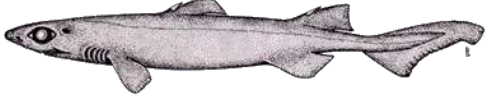


**Oceanic Whitetip Shark (*Carcharhinus longimanus*)**

Photo modified from *Sharks and Rays*. TC Tricas, K Deacon, P Last, JE McCosker, TI Walker, L Taylor. 1997.

**Deepsea Cat Shark (*Apristurus profundorum*)**

Drawing modified from *The Sharks of North American Waters*, J.I.Castro. Drawings by D.B. Stone III. 1983. The W.L. Moody Jr. Natural History Series. Texas A&M University Press. College Station, Texas.



<p>Nature Company Guides, Time Life Book Series. Weldon Owen Pty Ltd San Francisco.</p> 	
<p><b>Dusky Shark (<i>Carcharhinus obscurus</i>)</b>        Photo modified from <i>Sharks and Rays</i>. TC Tricas, K Deacon, P Last, JE McCosker, TI Walker, L Taylor. 1997. Nature Company Guides, Time Life Book Series. Weldon Owen Pty Ltd San Francisco.</p> 	<p><b>Smooth Dogfish (<i>Mustelus canis</i>)</b>        Photo modified from FishBase. 1998. FishBase 98 CD-ROM. ICLARM, Manila.</p> 
<p><b>Blue Shark (<i>Prionace glauca</i>)</b> Photo modified from <i>Sharks, History and Biology of the Lords of the Sea</i>. A. Mojetta. 1997. Swan Hill Press.</p> 	<p><b>Atlantic Sharpnose Shark (<i>Rhizoprionodon terraenovae</i>)</b> Photo modified from FishBase. 1998. FishBase 98 CD-ROM. ICLARM, Manila.</p> 
<p><b>Smooth Hammerhead (<i>Sphyrna zygaena</i>)</b> Photo modified from <i>Sharks and Rays</i>. TC Tricas, K Deacon, P Last, JE McCosker, TI Walker, L Taylor. 1997. Nature Company Guides, Time Life Book Series. Weldon Owen Pty Ltd San Francisco.</p> 	<p><b>Black Dogfish (<i>Centroscyllium fabricii</i>)</b> Drawing modified from <i>The Sharks of North American Waters</i>, J.I.Castro. Drawings by D.B. Stone III. 1983. The W.L. Moody Jr. Natural History Series. Texas A&amp;M University Press. College Station, Texas.</p> 
<p><b>Portuguese Shark (<i>Centroscymnus coelolepis</i>)</b> Photo modified from FishBase. 1998. FishBase 98 CD-ROM. ICLARM, Manila.</p> 	<p><b>Rough Sagle (<i>Etmopterus princeps</i>)</b> Drawing modified from <i>The Sharks of North American Waters</i>, J.I.Castro. Drawings by D.B. Stone III. 1983. The W.L. Moody Jr. Natural History Series. Texas A&amp;M University Press. College Station, Texas.</p> 
<p><b>Greenland Shark (<i>Somniosus microcephalus</i>)</b> Photo modified from <i>Greenland Sharks</i>, by N. Caloyianis. National Geographic Sept. 1998.</p>	<p>For more great info on shark biology, anatomy and research check out the <a href="http://www.canadiansharkresearch.com">Canadian Shark Research Laboratory</a> where the above photographs and drawings are from.</p>



### Common Skates & Rays

<p><b>Little Skate</b> (<i>Raja erinacea</i>) - Bottom living, winter residents, they reach a max. length of 53 cm (or 21"). They eat bottom living invertebrates such as crustaceans. Of little value to the fishing industry, they are used for fish meal. They are also used as laboratory animals.</p>	<p><b>Barndoor Skate</b> (<i>Raja laevis</i>) - Bottom living, probably year-round, they reach a length of 127-142cm (or 50-56"). They eat bivalves, squid, rock crabs, lobsters, shrimp, marine worms, and a variety of fish. Of little value to the fishing industry, they are sometimes ground into fish meal.</p>
<p><b>Winter Skate</b> (<i>Raja ocellata</i>) - Bottom living, winter residents, they reach a length of 80cm (or 31"). They eat crustaceans, small fish, and bivalves. Of little value to the fishing industry, they are sometimes ground into fish meal. They are also used occasionally as laboratory animals.</p>	<p><b>Thorny Skate</b> (<i>Raja radiata</i>) - Bottom living, found year round, they reach max. lengths of 100 cm (or 39") although size varies with location. They eat polychaetes, crustaceans and fish. Of little value to the fishing industry, they are sometimes ground into fish meal. In Europe these skates are marketed for human consumption.</p>
<p><b>Smooth Skate</b> (<i>Raja senta</i>) - Bottom living, year round residents, they reach max. lengths of 60 cm (24"). They feed on crustaceans. Of little value to the fishing industry, they are sometimes ground into fish meal.</p>	

### Rarely Occurring or Occasional Skates & Rays:

<p><b>Atlantic Torpedo</b> (<i>Torpedo nobiliana</i>) - Although not common it is worth noting that this ray can truly be called "electric". Electric shocks are emitted when the ray is touched in the head region. It ranges from 1.5-1.8m (5-6') in length and is usually found in warmer waters but specimens have been collected from Grand Manan waters.</p>	
<p><b>Deepwater Skate</b> (<i>Bathyraja richardsoni</i>)</p>	<p><b>Chocolate Skate</b> (<i>Raja bathyphila</i>)</p>
<p><b>Round Skate</b> (<i>Raja fyllae</i>)</p>	<p><b>Shorttail Skate</b> (<i>Raja jenseni</i>)</p>
<p><b>White Skate</b> (<i>Raja lintea</i>)</p>	<p><b>Soft Skate</b> (<i>Raja mollis</i>)</p>
<p><b>Spinytail Skate</b> (<i>Raja spinicauda</i>)</p>	<p><b>Roughtail Stingray</b> (<i>Dasyatis centroura</i>)</p>
<p><b>Pelagic Stingray</b> (<i>Dasyatis violacea</i>)</p>	<p><b>Atlantic Manta</b> (<i>Manta birostris</i>)</p>

### Rarely Occurring or Occasional Chimeras:

<p><b>Longnose Chimaera</b> (<i>Harriotta raleighana</i>)</p>	<p><b>Deepwater Chimaera</b> (<i>Hydrolagus affinis</i>)</p>
<p><b>Knifefnose Chimaera</b> (<i>Rhinochimaera atlantica</i>)</p>	

References:

Scott, W.B. and M.G. Scott. 1988. Atlantic Fishes of Canada. Can.Bull.Fish.Aquat.Sci. 219:731pp.

[Canadian Shark Research Laboratory](#)

**Have a Question? E-Mail us at: [info@grandmanannb.com](mailto:info@grandmanannb.com)**

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