



# SHARKS

## Shark families

College of Marine Sciences Shanghai Ocean University

2017

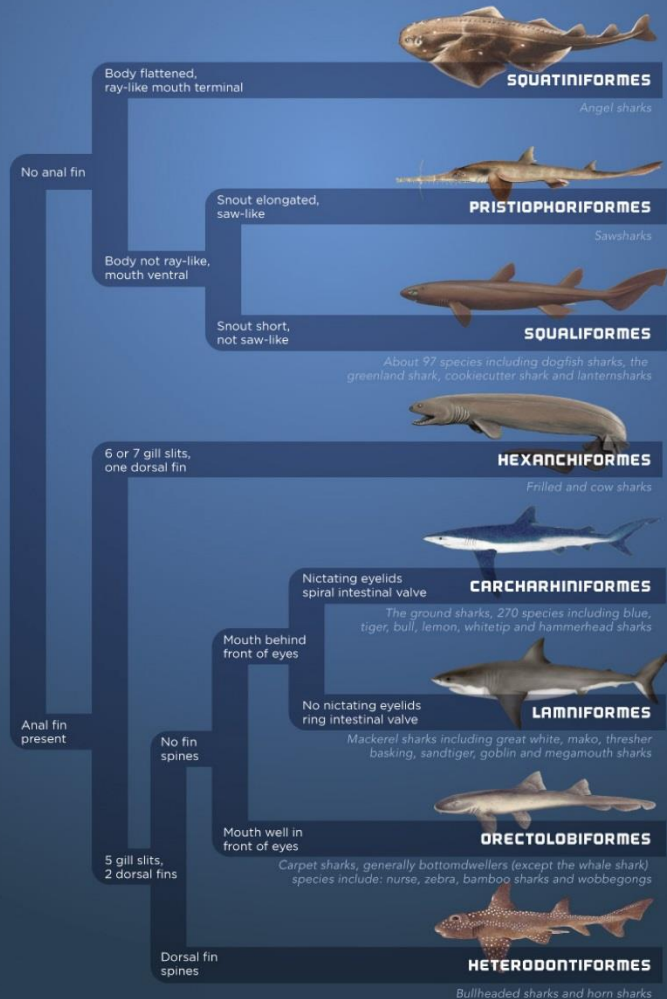
# Shark shapes

- There are more than 450 species of shark and scientists divide them into eight large groups, called orders. They are divided into about 34 smaller groups, or families.

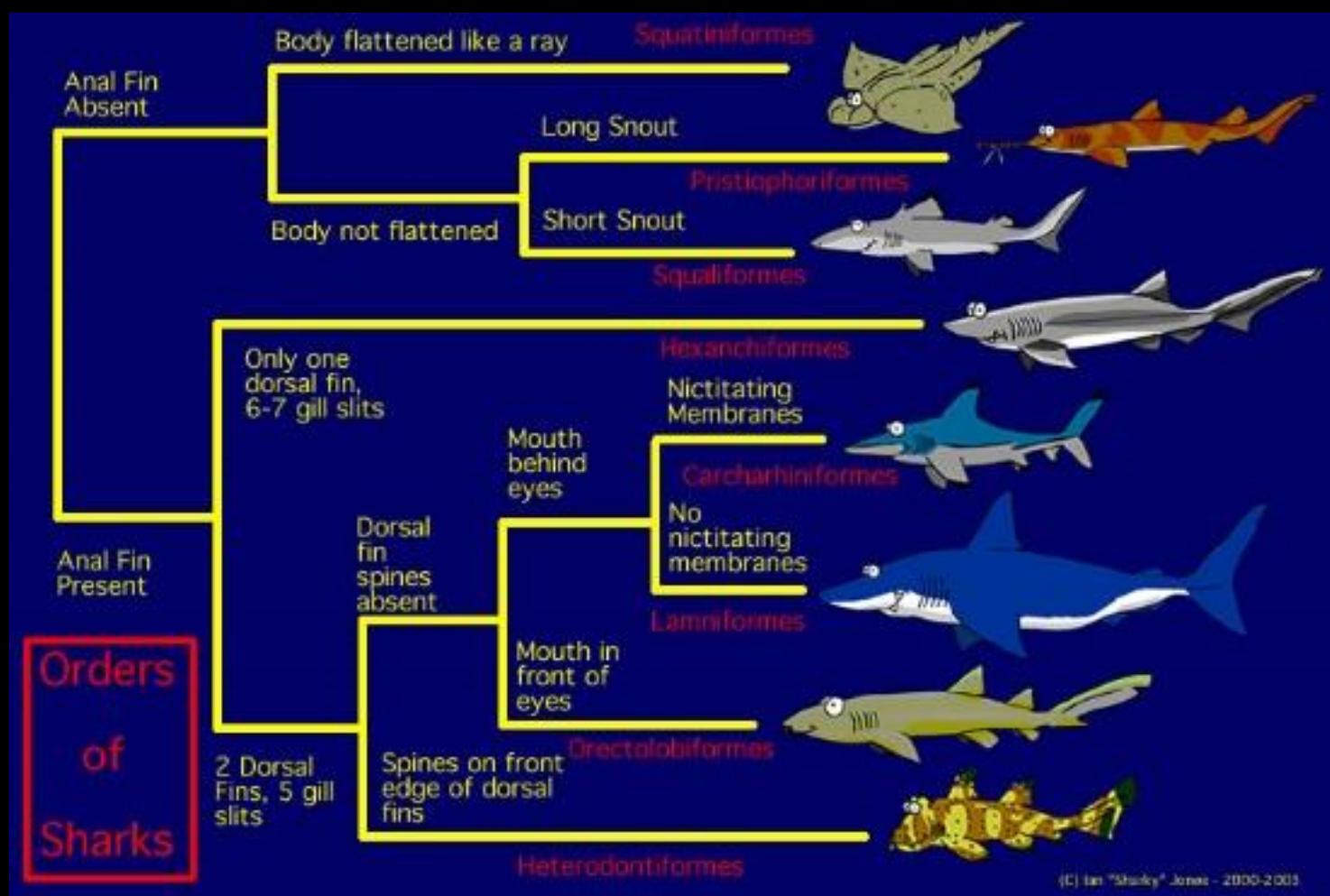
# SHARK FAMILY

ONE BIG, HAPPY, CARNIVOROUS FAMILY

There are about 400 species of sharks, but scientists have categorized them all into 8 convenient groups based on some of their defining features. Take a look below at how diverse the shark family is!



# Orders of Sharks



(C) Ian "Sharky" Jones - 2000-2003

# Frilled shark

- Found in the cold, deep water of Pacific and Atlantic oceans, frilled sharks feed on prey such as octopus and squid. Their jaws stretch wide to engulf their prey.



皱鳃鲨 *Chlamydoselachus anguineus*

# Frilled shark



# Sixgill and sevengill sharks

- Four species of cow sharks: the bluntnose sixgill shark, the bigeye sixgill shark, the sharpnose sevengill shark, the broadnose sevengill shark.



*Hexanchus griseus*



*Hexanchus vitulus*

# Sixgill and sevengill sharks



- Four species of cow sharks: the bluntnose sixgill shark, the bigeye sixgill shark, the sharpnose sevengill shark, the broadnose sevengill shark.



© Kelvin Aitken / V&W / imagequestmarine.com

*Heptranchias perlo* Bommaterre



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*Notorynchus cepedianus*

# Dogfish sharks



- The dogfish shark order, consists of about 130 species in six families. These sharks usually have spines in front of their dorsal fins and they have no anal fin.
- Millions of dogfish sharks are caught every year for their meat, fins, oil and skin.
- The spiny dogfish has the longest known gestation period of any shark. Females can be pregnant for up to two years.





# Spiny dogfish shark



# Gulper sharks



- There are about 17 species of gulper sharks, which mainly live in deep water, from 200-1500 m deep. These sharks have cylindrical bodies, and huge green or yellowish eyes to help them see in deep, dark water.



# Lantern sharks



- Lantern sharks are the largest family of dogfish sharks, with over 50 species. They live all over the world, near the bottom in deep water, from 200-1500 m deep.

# Sleeper sharks



- There are about 18 species of sleeper shark. They are named after their slow, sluggish swimming habits.
- Greenland shark prefer cold water. They live in the north Atlantic, around Greenland, Iceland and Canada, and can stand temperatures as low as 2°C and at depths of around 1500 m.
- Fresh Greenland shark meat is poisonous, but can be eaten safely if it is boiled several times. Inuit people used the skin to make boots and the teeth for knife blades.

# Greenland Sharks



# Roughsharks

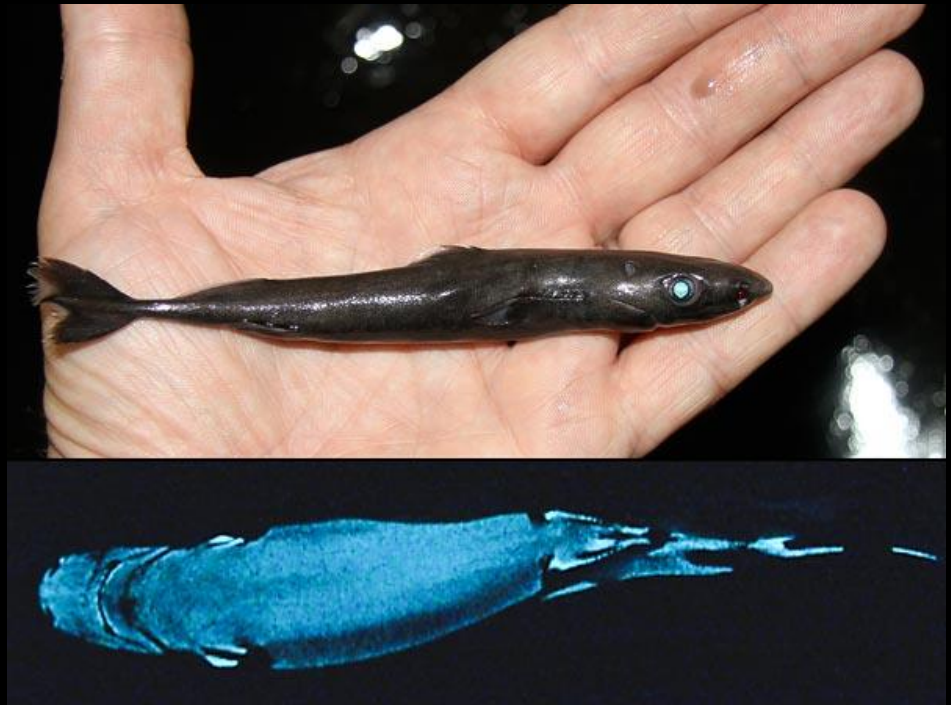
- The five species of roughshark are small sharks with two high fins on the back, which look like triangular sails. One species even called the sailfin roughshark. They are named after their rough, tough skin, which is covered in large, prickly denticles, set very close together.



# Pygmy sharks



- These sharks are all small, reaching lengths of about 15-30cm.
- The daily vertical migrations of spined pygmy sharks involve huge changes in water pressure that most other fish could not survive.



# Angelsharks

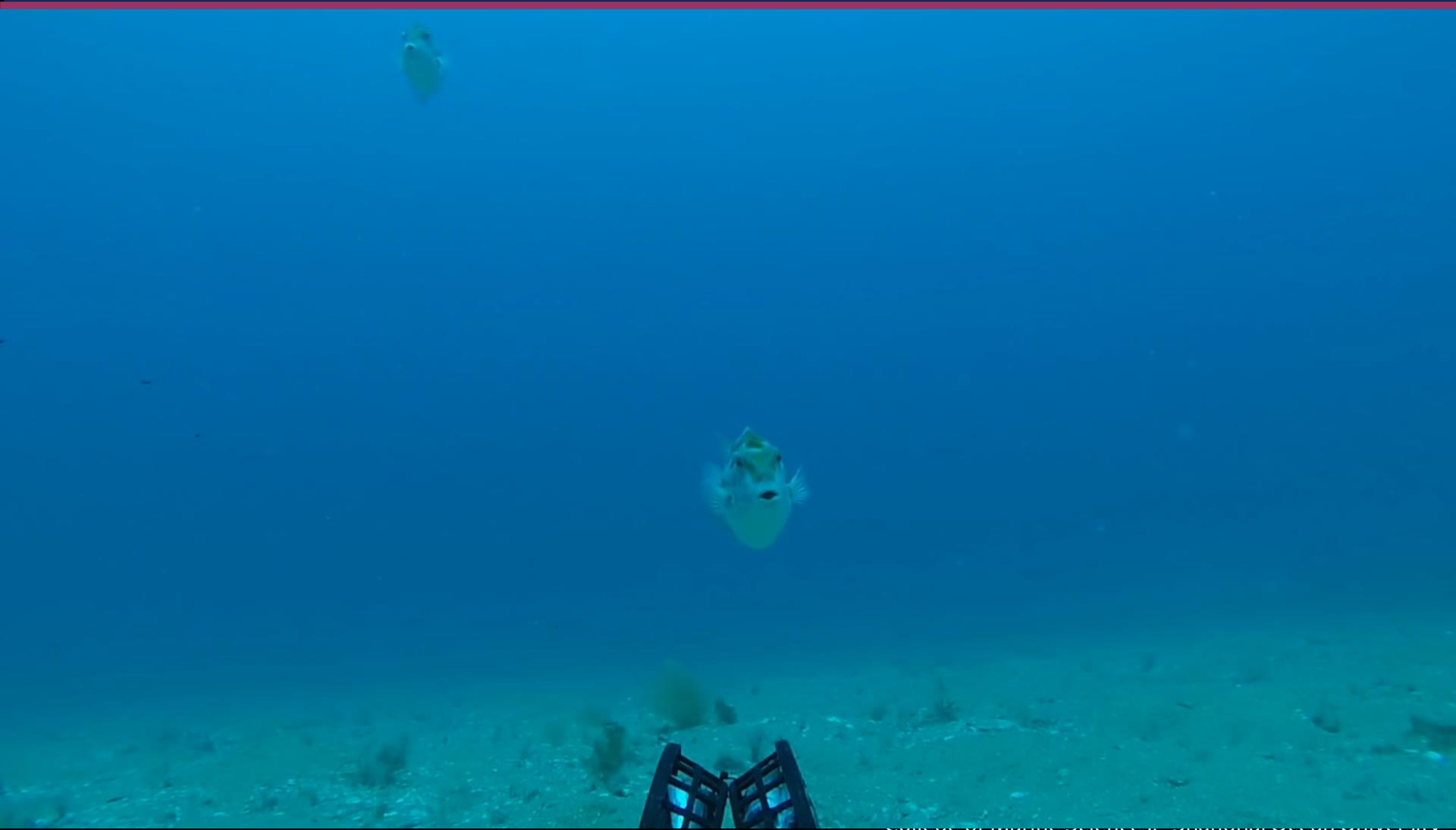


- Angelsharks are named after the wide, wing-like shape of their fins. They are also called monkfish.
- These sharks have flattened bodies. This allows them to stay close to the sea bed.





# Sawshark



# Sawshark and sawfish

- Sawsharks are categorized with the sharks.
- Sawfish are categorized with the rays.
- Sawfish have ventral gill slits, smaller and flatter body.
- Sawsharks have gill slits on the side, rounded body, bigger overall, and presence of barbels.



# Bullhead sharks

- There are 10 species of bullhead sharks. They all have a broad, flat head.
- They live in shallow waters, and most are found in the western Pacific Ocean. They are found in the Philippines, Indonesia, and the southern coast of China.



all eyes.  
sight

# Bullhead sharks



# Carpet Sharks



- The carpet sharks are a varied group of about 40 different species of sharks, including wobbegongs, nurse sharks, blind sharks and whale sharks, etc.
- They live in warm tropical seas, such as those around Australia, Indonesia and Arabia, and often inhabit shallow waters around reefs and sandbars.
- Most carpet sharks feed on crabs, shellfish, octopus and sea worms. Wobbegongs can eat other small sharks.

# Wobbegong shark



# Bamboo sharks



- Bamboo sharks have leg-like, muscular fins, which they use for clambering over coral reefs. They can survive out of water for up to half a day.
- It hunt small fish and crabs at night, but hides away in rocky crevices by day.

# Banded Bamboo shark







**Dr. Matt Gilligan - Savannah State University**

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# Nurse shark



# Whale shark



- Whale sharks are the biggest kind of shark and the largest fish on Earth. They grow to enormous length of 14m and have the same mass as a double –decker bus.
- One female whale shark was found with 300 pups inside her.
- A whale shark's skin is around 10 cm thick, making it the thickest of any living creature.

# Whale shark



# Mackerel sharks



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KS.



# Sand tiger shark



- Sand tiger sharks are not closely related to tiger sharks. They belong to a different order, and are more closely related to makos and great white.
- A mouthful of sharp, pointed teeth help the sand tiger shark to keep hold of slippery fish easily.
- Sand tiger shark can swallow air from the surface to help them hover at a particular depth in the water.
- Intrauterine Cannibalism



# Sand tiger shark



SHARK  
ACADEMY

# Thresher sharks



**SHARK**  
**ACADEMY**



# Great white shark

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 **Discovery**  
CHANNEL



# Porbeagle sharks



# Basking shark



# Goblin shark



# Catsharks

- Catshark species
- Catshark small fish
- Catshark



an 160

eat

# Requiem sharks



- There are at least 56 species in the requiem family.
- This family includes some of the most typical and well known sharks, such as blue shark, lemon shark, tiger shark and bull shark.
- Most requiem sharks live in tropical waters, both near the shore and out in the open ocean, with most living in sunlit surface waters rather than the deep ocean.
- They have two dorsal fins and their eyes are usually round with nictitating eyelids.

# Silvertip shark





# Oceanic whitetip shark



- The oceanic whitetip is a large hunter that lives in open oceans. It can reach lengths of 3.5m or even 4m.
- Oceanic whitetips are inquisitive sharks and often follow schools of tuna and squid, two of their preferred food.
- They also follow ships, often in groups. This may be why sharks were once called 'see dogs'.
- The top predator of the open ocean but now is critically in danger.

# Oceanic whitetip shark



Discovery  
CHANNEL



# Silky shark



# Bull shark



- The bull shark is a powerful, aggressive hunter.
- Bull sharks can live in freshwaters.
- Some experts think that bull sharks may be the most dangerous species. This is because they often lurk in shallow waters where humans swim.



# Bull shark



# Tiger shark



- The tiger shark will attack almost anything, including humans, making it one of the most dangerous sharks. This species is found in most of the world's warmer seas and oceans. It sometimes swims into river mouths.
- Tiger sharks are named after the striped markings of the young, which fade with age.



# Tiger shark



# Lemon shark



- The lemon shark gets its name from its yellowish color, especially on its underside. It is related to tiger and bull sharks and can grow up to 3 m in length
- Apart from the color, you can recognize a lemon shark by its two similarly sized dorsal fins. In most shark species, the first dorsal fin is much bigger.





# Lemon shark



SHARK  
ACADEMY

# Blue shark



- The true open ocean sharks, blue sharks are ocean extremely common, and is found in almost every part of every ocean, but now the population is falling because it is so heavily overfished.
- Blue shark have large litters of pups, sometimes giving birth to more than 100 at a time.



# Blue shark



# Hammerhead sharks



- A hammer head shark has to turn its head from side to side in order to see forwards.
- Experts think this head shape may help the shark to find food, by spreading out their ampullae of Lorenzini over a wide area.
- There are nine species of hammerhead, including great, scalloped, smooth, winghead and bonnethead sharks.
- Hammerhead have taller dorsal fin and smaller pectoral fins than most other sharks. This helps them to feed on the sea bed.
- A hammerhead can detect the electrical signals from the heart muscles of a stingray buried on the sea bed from 25cm away.

# Great Hammerhead sharks



# Tiger shark vs great hammerhead

