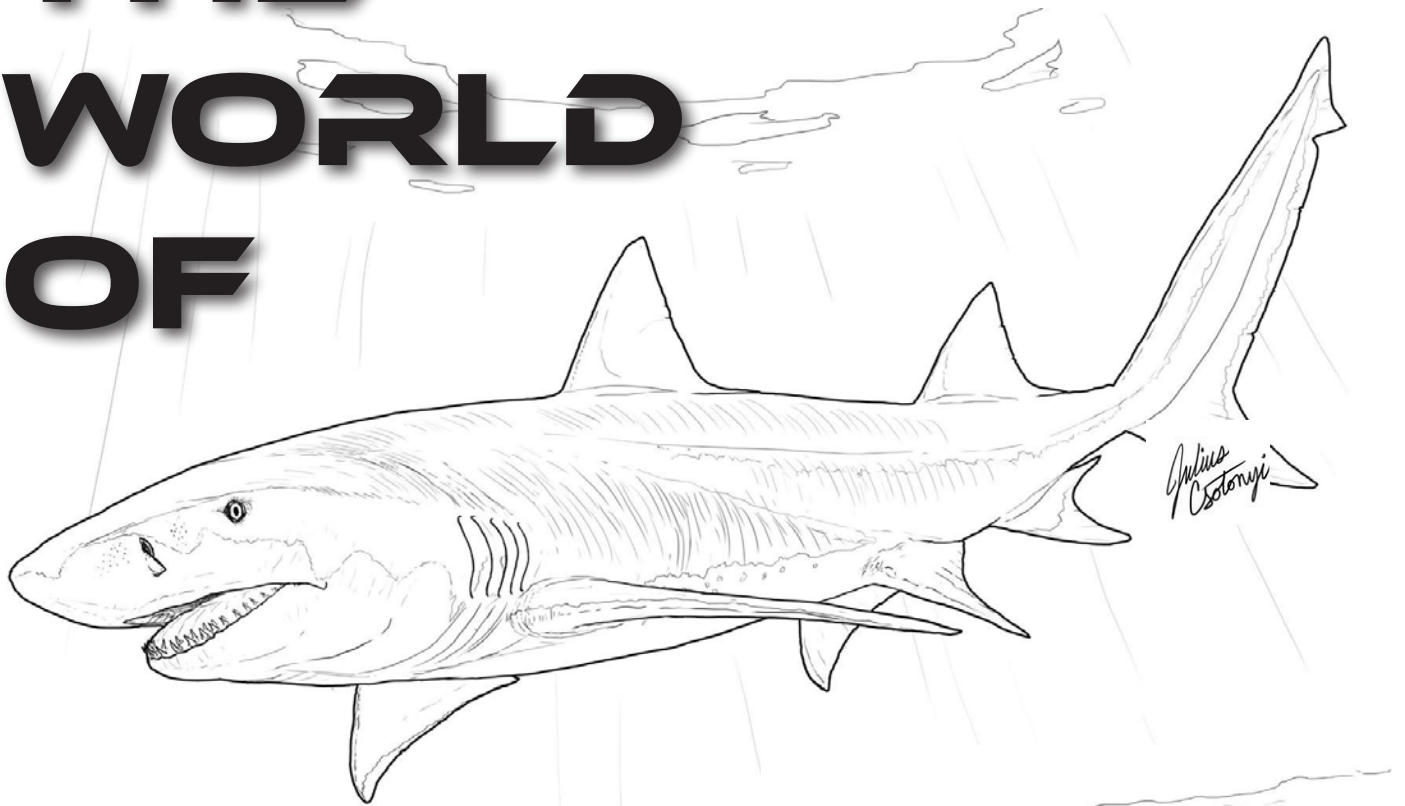




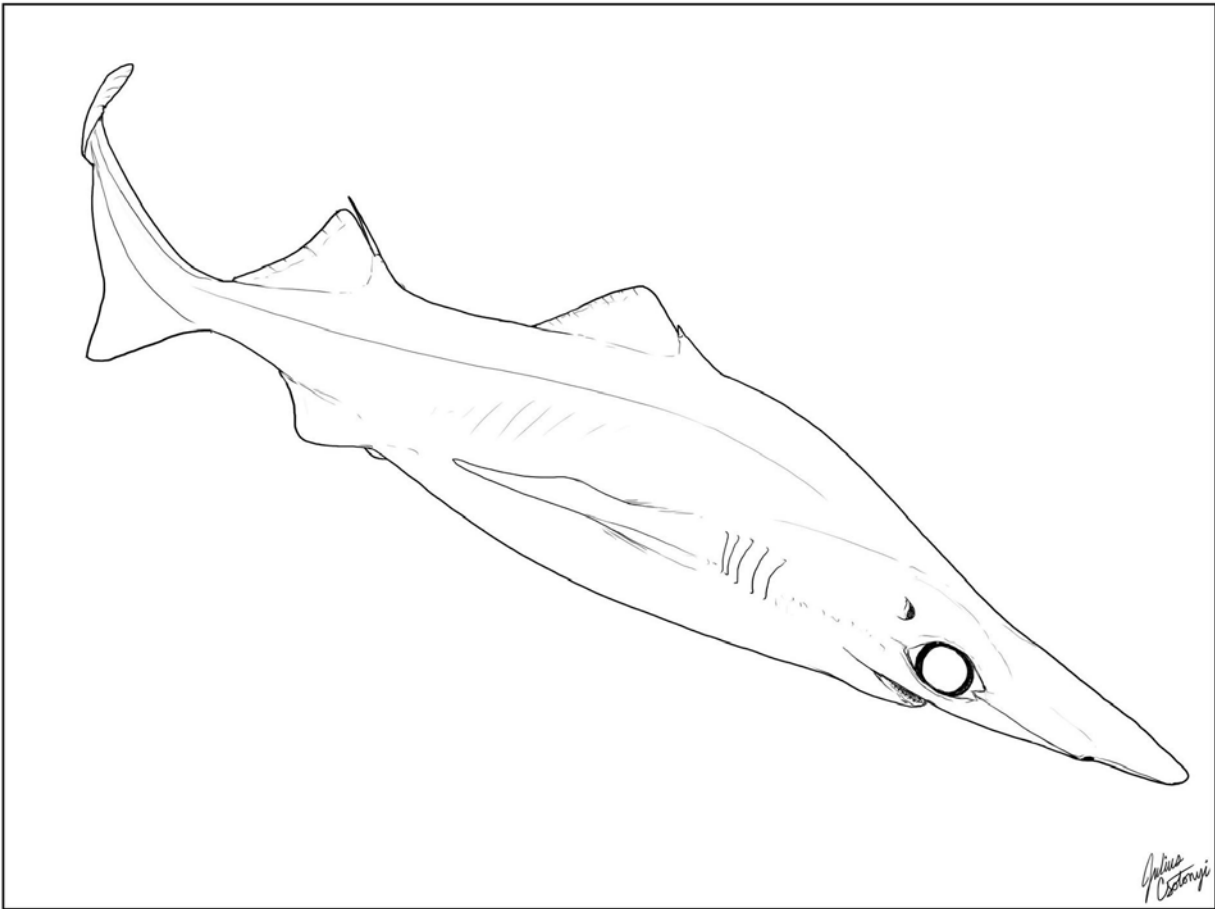
THE WORLD OF



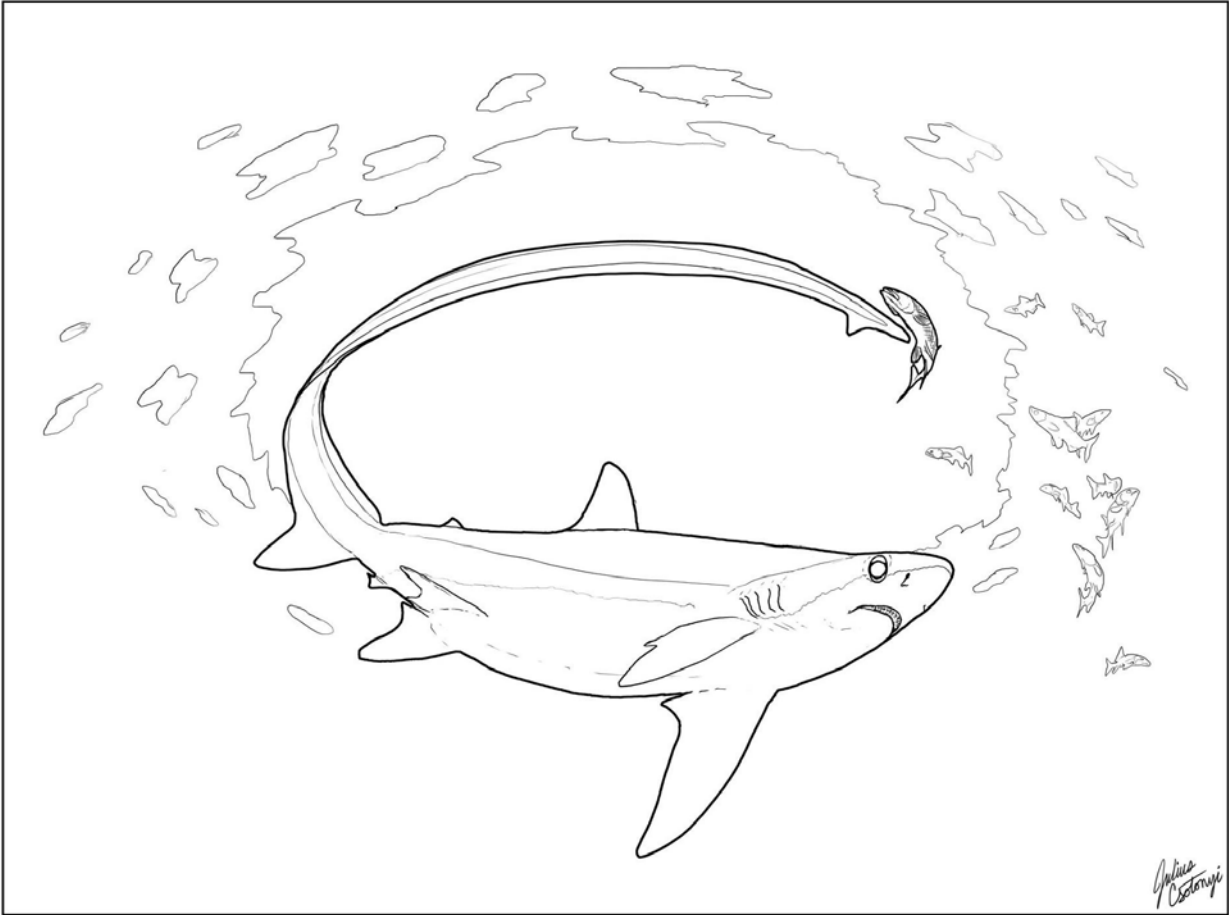
SHARKS

ILLUSTRATIONS BY
JULIUS CSOTONYI

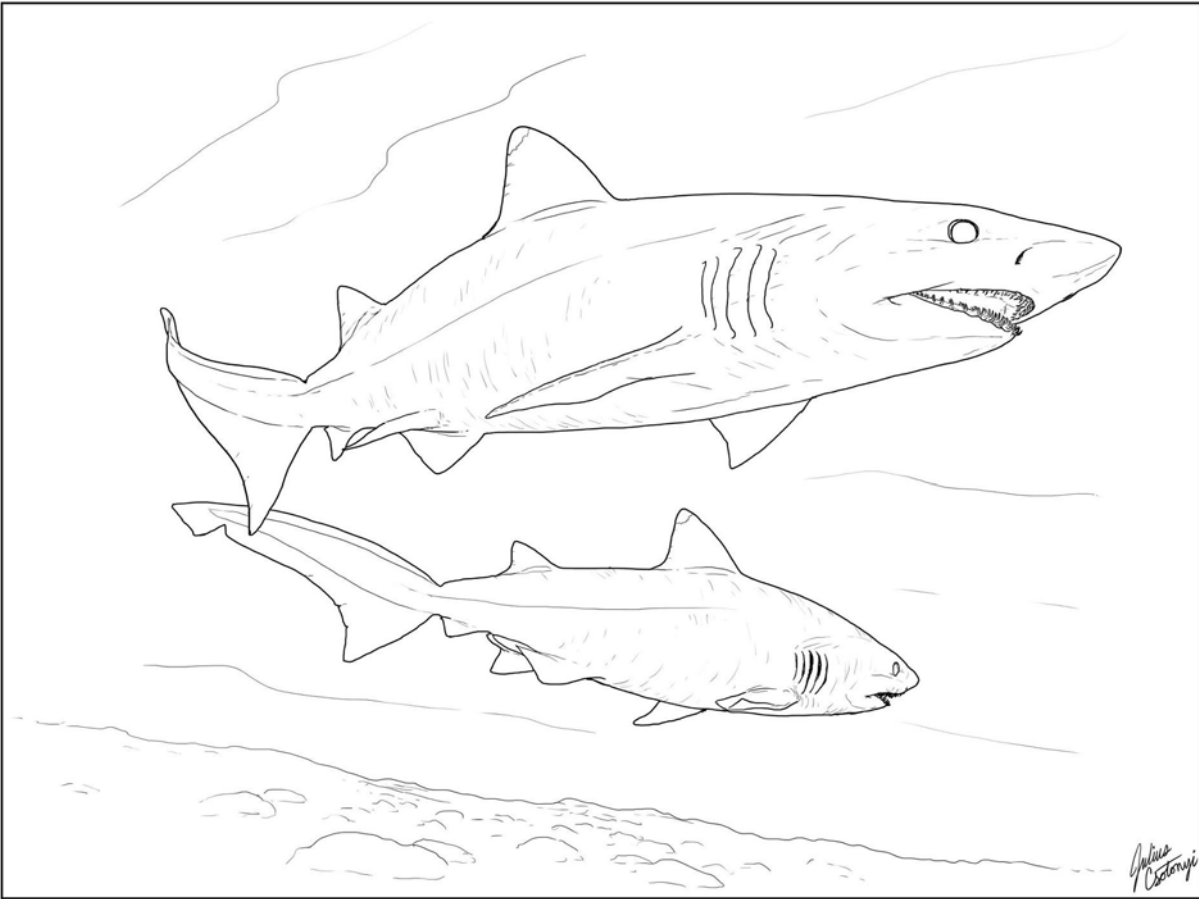
ATLANTIC STATES MARINE FISHERIES COMMISSION
Sustainable and Cooperative Management of Atlantic Coastal Fisheries



Arrowhead dogfish (*Deania profundorum*)



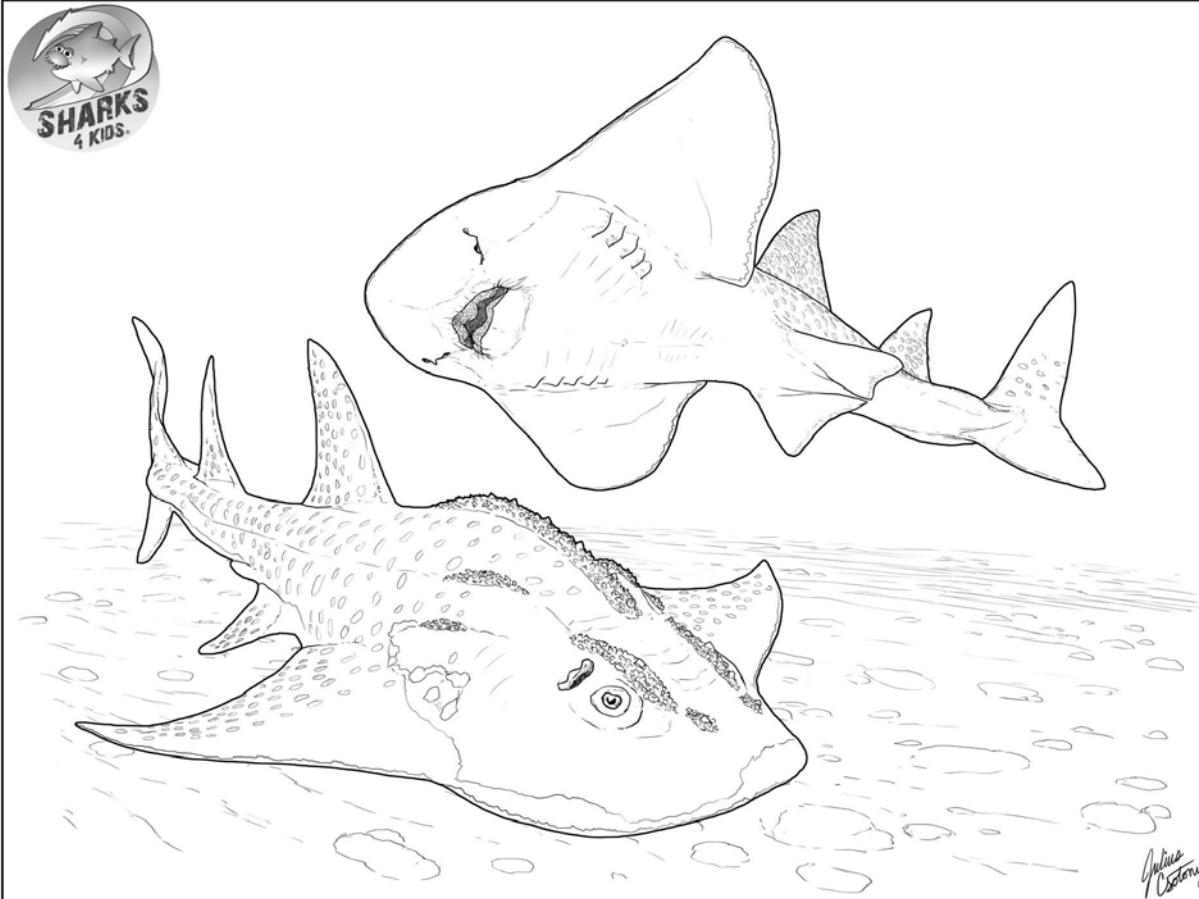
A bigeye thresher shark (*Alopias superciliosus*), stunning a herring with its powerful tail just beneath the ocean surface. This species is listed as 'Vulnerable' by the International Union for Conservation of Nature's Red List of Threatened Species.



Julius Csotonyi

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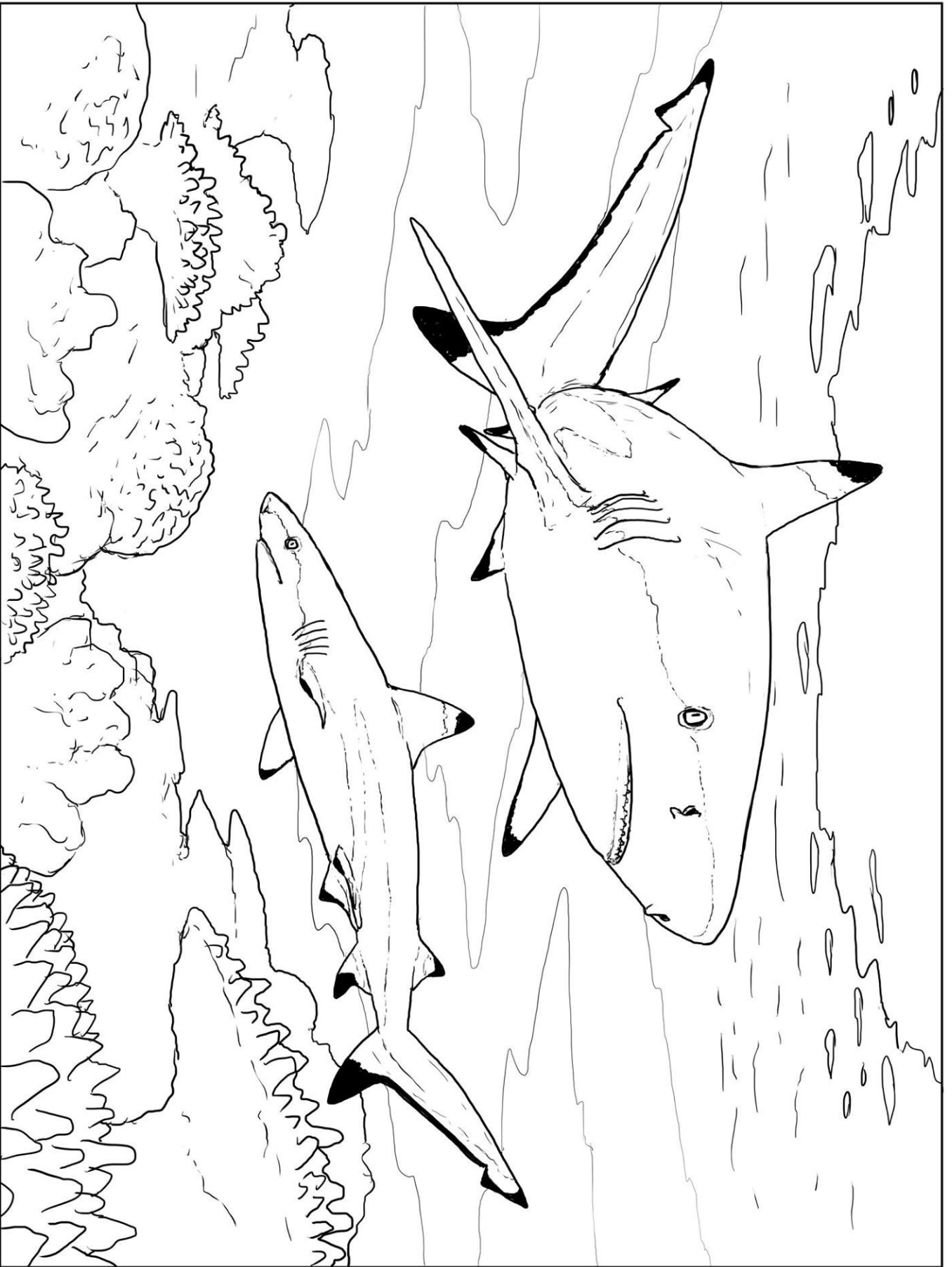
The **bigeye sandtiger** (*Odontaspis noronhai*) is a deep water species with striking green eyes and a uniformly brown body, with a white tipped first dorsal fin. The International Union for Conservation of Nature lists it as 'Least Concern'.



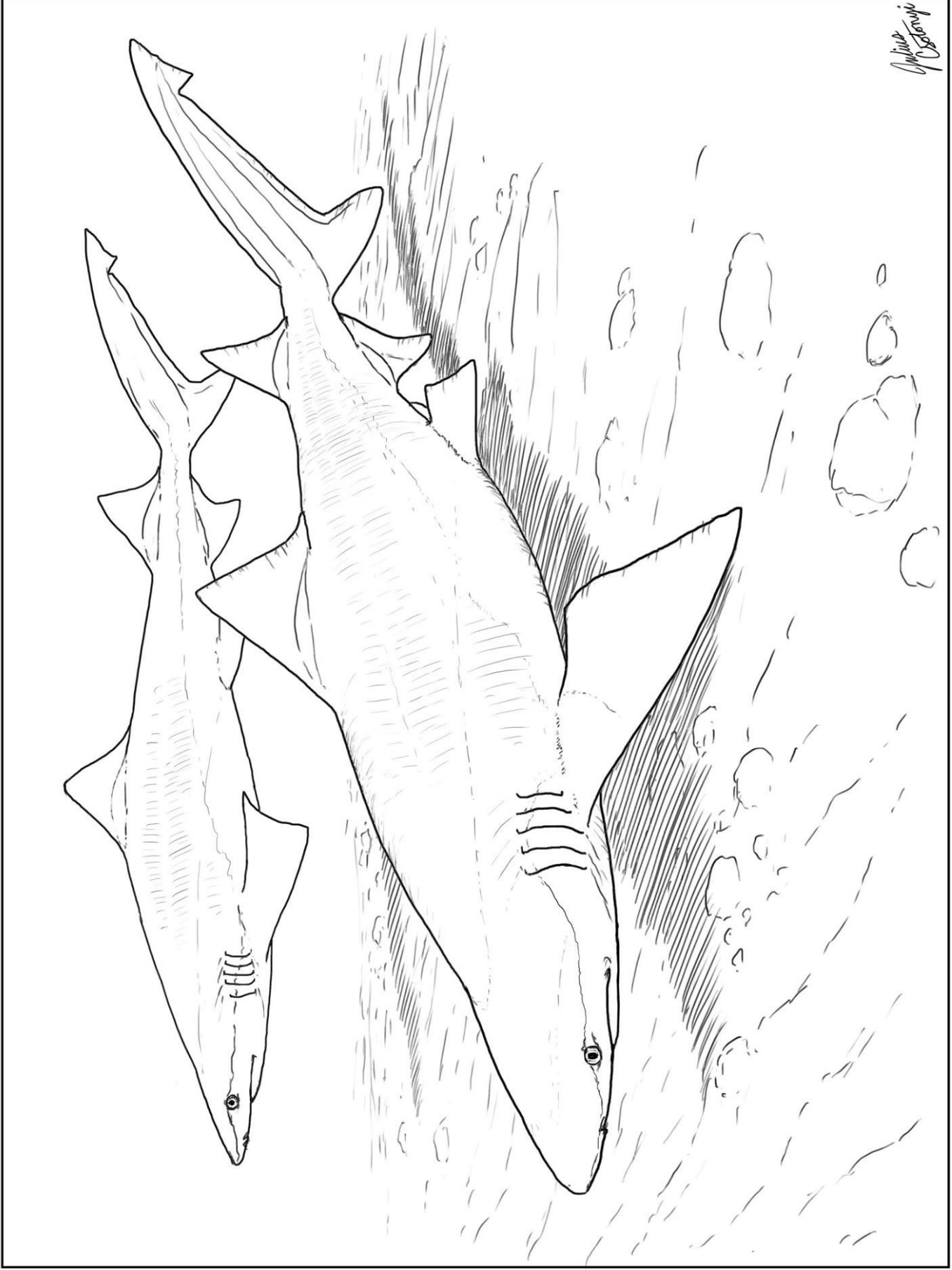
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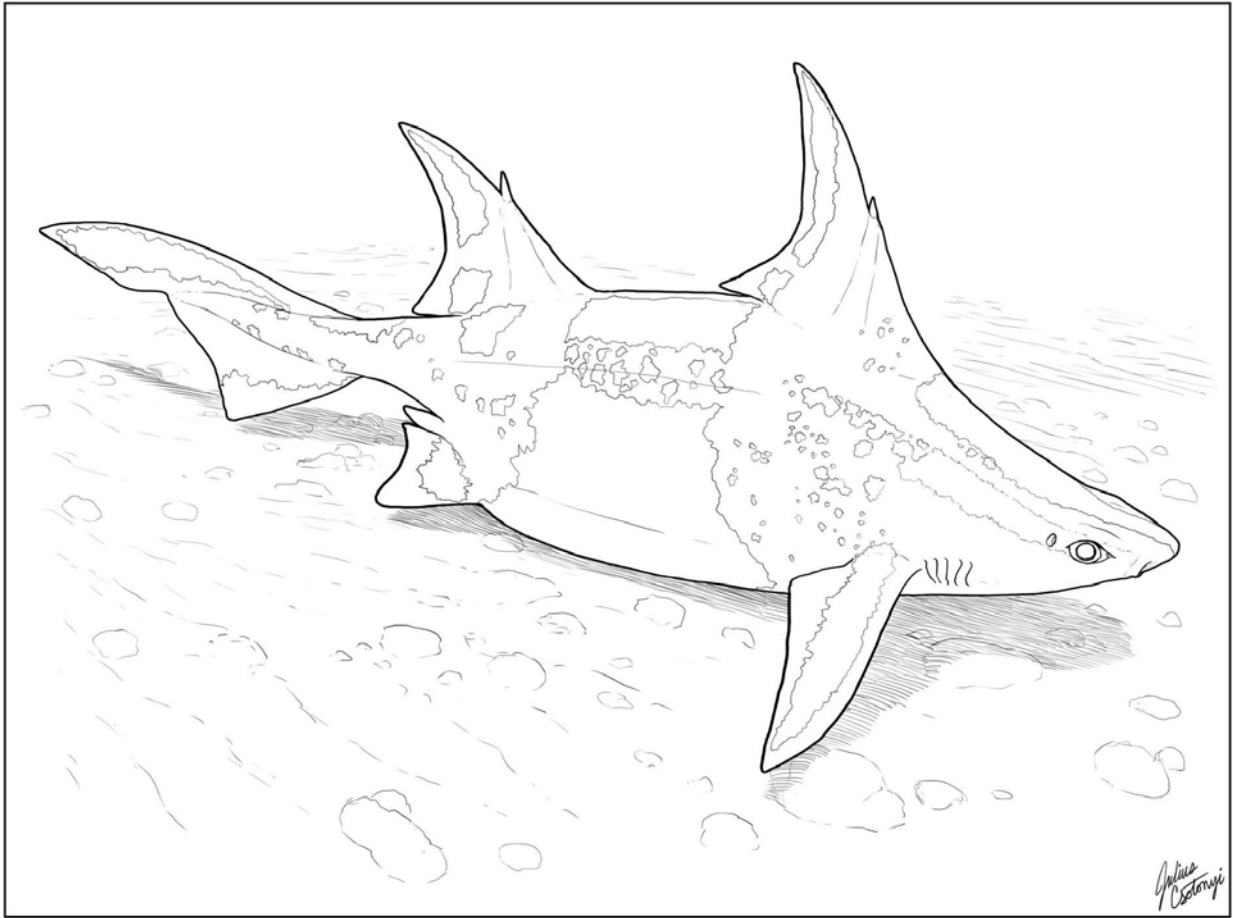
The **bowmouth guitarfish**, or **shark ray** (*Rhina ancylostoma*), listed as 'Critically Endangered' by the International Union for Conservation of Nature's Red List of Threatened Species.



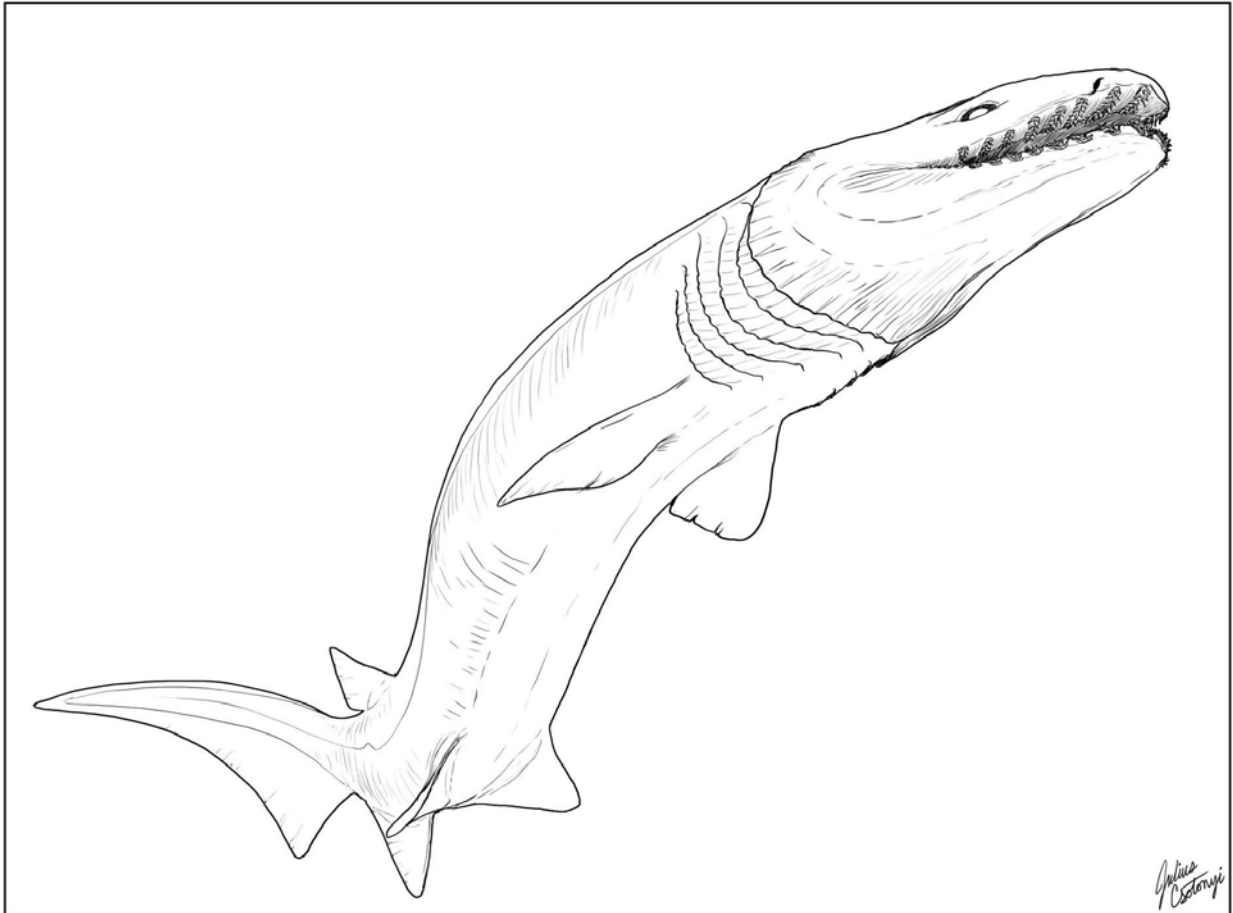
Blacktip reef shark (*Carcharhinus melanopterus*)



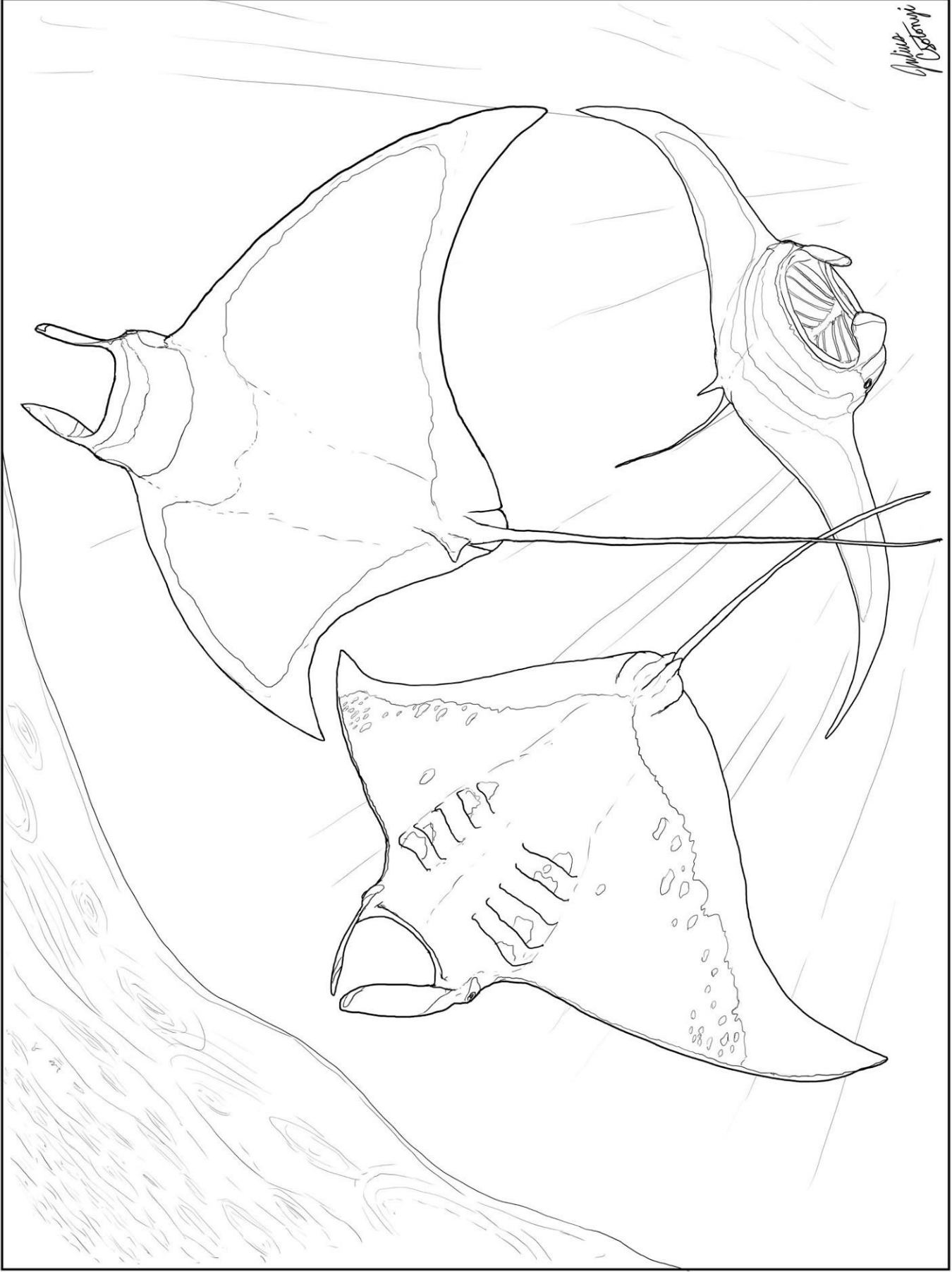
A pair of **Borneo broadfin shark** (*Lamiopsis tephrodes*) cruise over the seabed in southeast Asia. As of 2019, this species has no listing under the International Union for Conservation of Nature's Red List of Threatened Species



The **Caribbean roughshark** (*Oxynotus caribbaeus*) hovers over the seabed in the Gulf of Mexico. This species is listed as 'Data Deficient' under the International Union for Conservation of Nature's Red List of Threatened Species.



Frilled shark (*Chlamydoselachus anguineus*)



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The **giant devil ray** (*Mobula mobular*) is one of 11 species of large filter-feeding rays possessing feeding appendages known as cephalic lobes. The International Union for Conservation of Nature lists it as 'Endangered'.

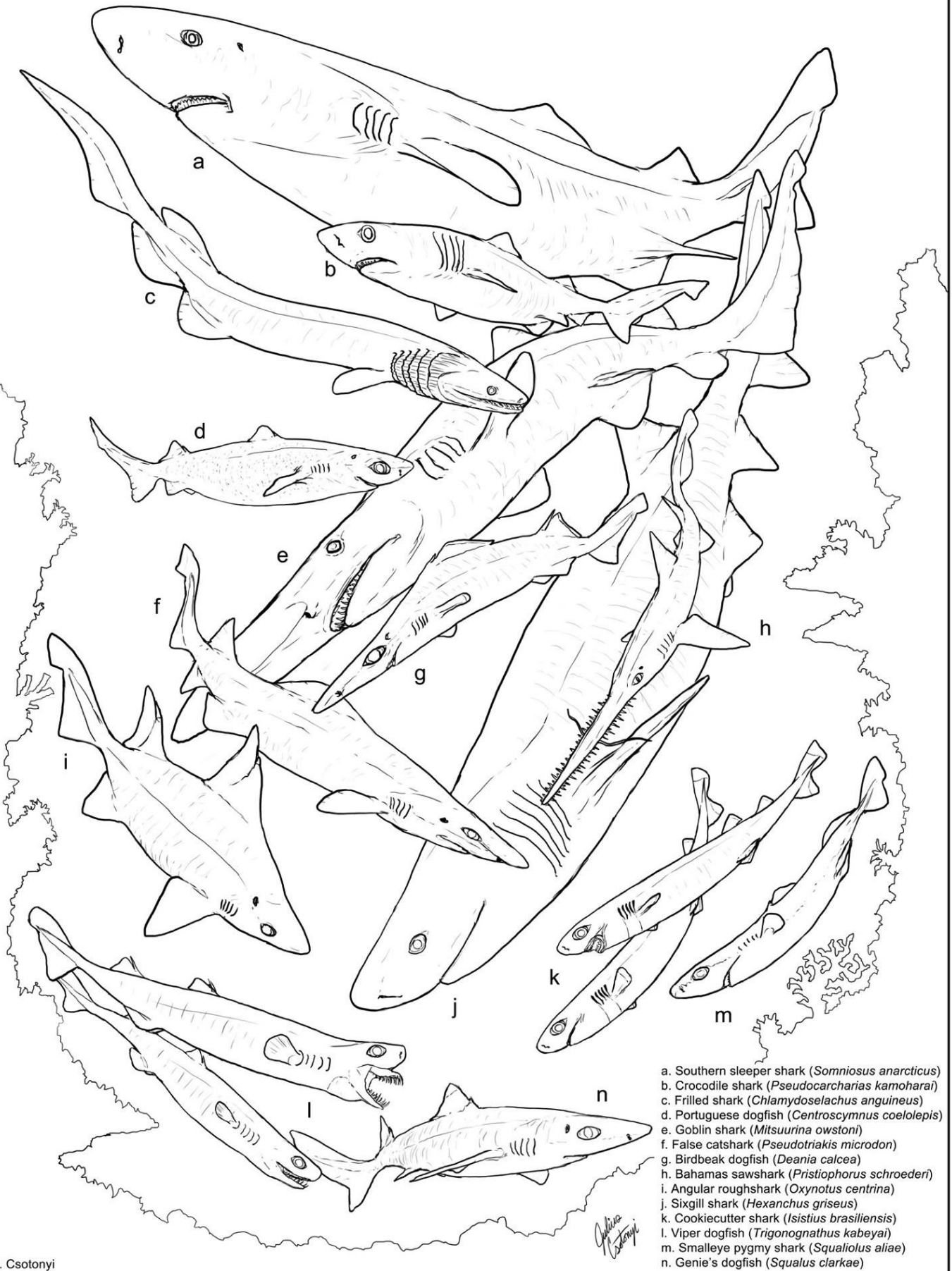
Catsharks, weasel sharks, and houndsharks



- a. Pyjama shark (*Poroderma africanum*)
- b. Magnificent catshark (*Proscyllium magnificentum*)
- c. Springer's sawtail catshark (*Galeus springeri*)

- d. Spotted houndshark (*Triakis maculata*)
- e. Atlantic weasel shark (*Paragaleus pectoralis*)
- f. Jaguar catshark (*Bythaelurus giddingsi*)

Deep Water Sharks



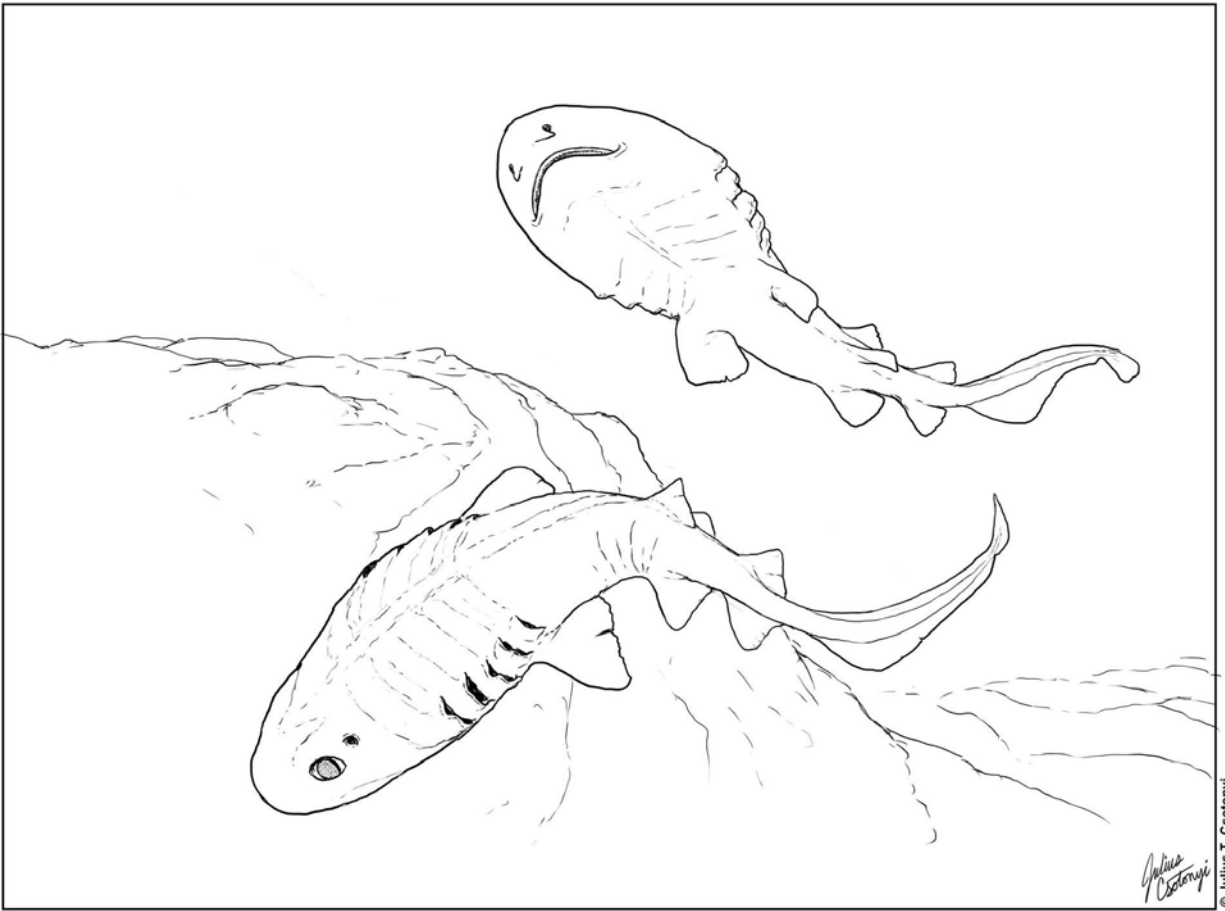
- a. Southern sleeper shark (*Somniosus anarcticus*)
- b. Crocodile shark (*Pseudocarcharias kamoharai*)
- c. Frilled shark (*Chlamydoselachus anguineus*)
- d. Portuguese dogfish (*Centroscymnus coelolepis*)
- e. Goblin shark (*Mitsurina owstoni*)
- f. False catshark (*Pseudotriakis microdon*)
- g. Birdbeak dogfish (*Deania calcea*)
- h. Bahamas sawshark (*Pristiophorus schroederi*)
- i. Angular roughshark (*Oxynotus centrina*)
- j. Sixgill shark (*Hexanchus griseus*)
- k. Cookiecutter shark (*Isistius brasiliensis*)
- l. Viper dogfish (*Trigonognathus kabeyai*)
- m. Smalleye pygmy shark (*Squaliolus aliae*)
- n. Genie's dogfish (*Squalus clarkae*)



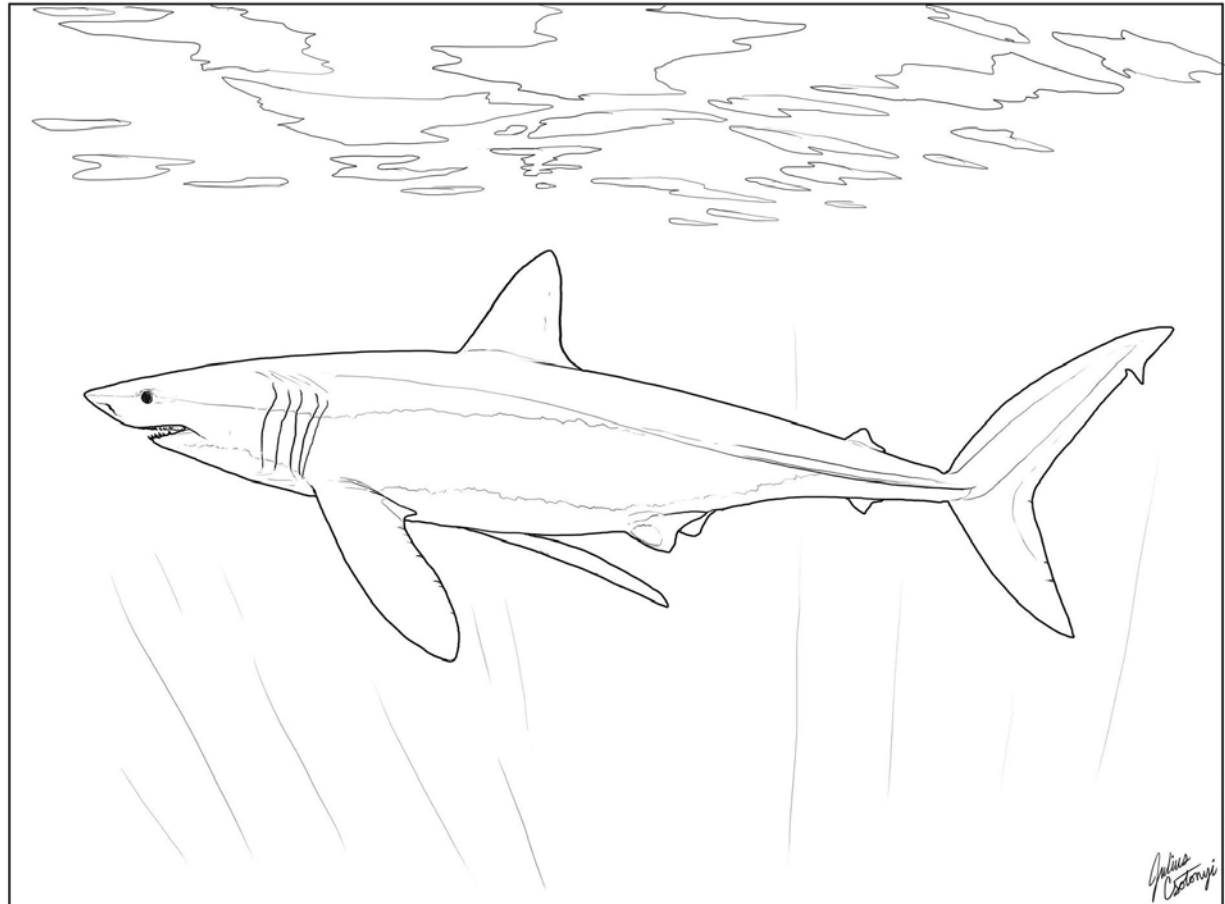
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The **Giant guitarfish** (*Glaucostegus typus*), listed as 'Vulnerable' by the International Union for Conservation of Nature's Red List of Threatened Species.

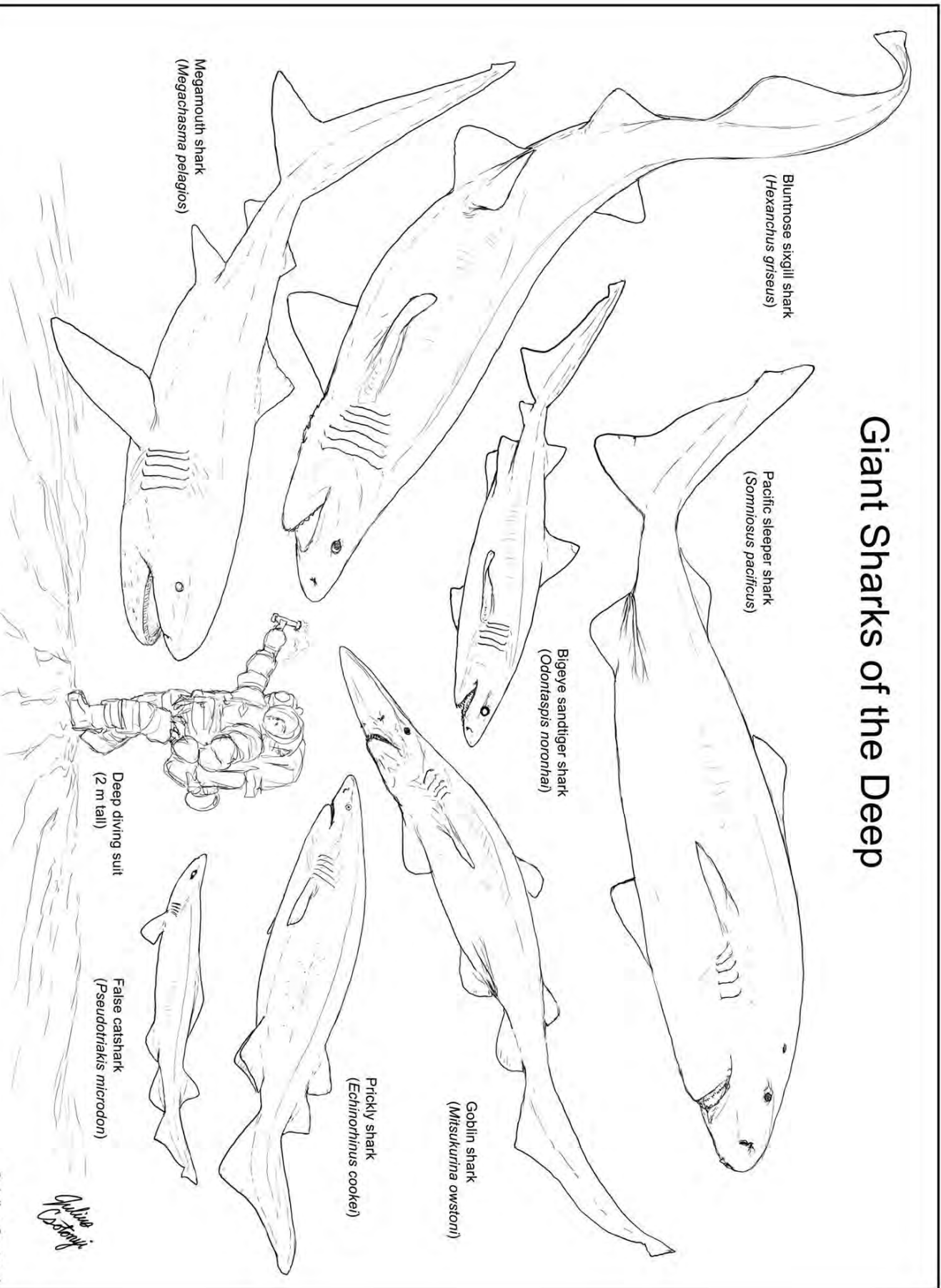


Lollipop catshark (*Cephalurus cephalus*)



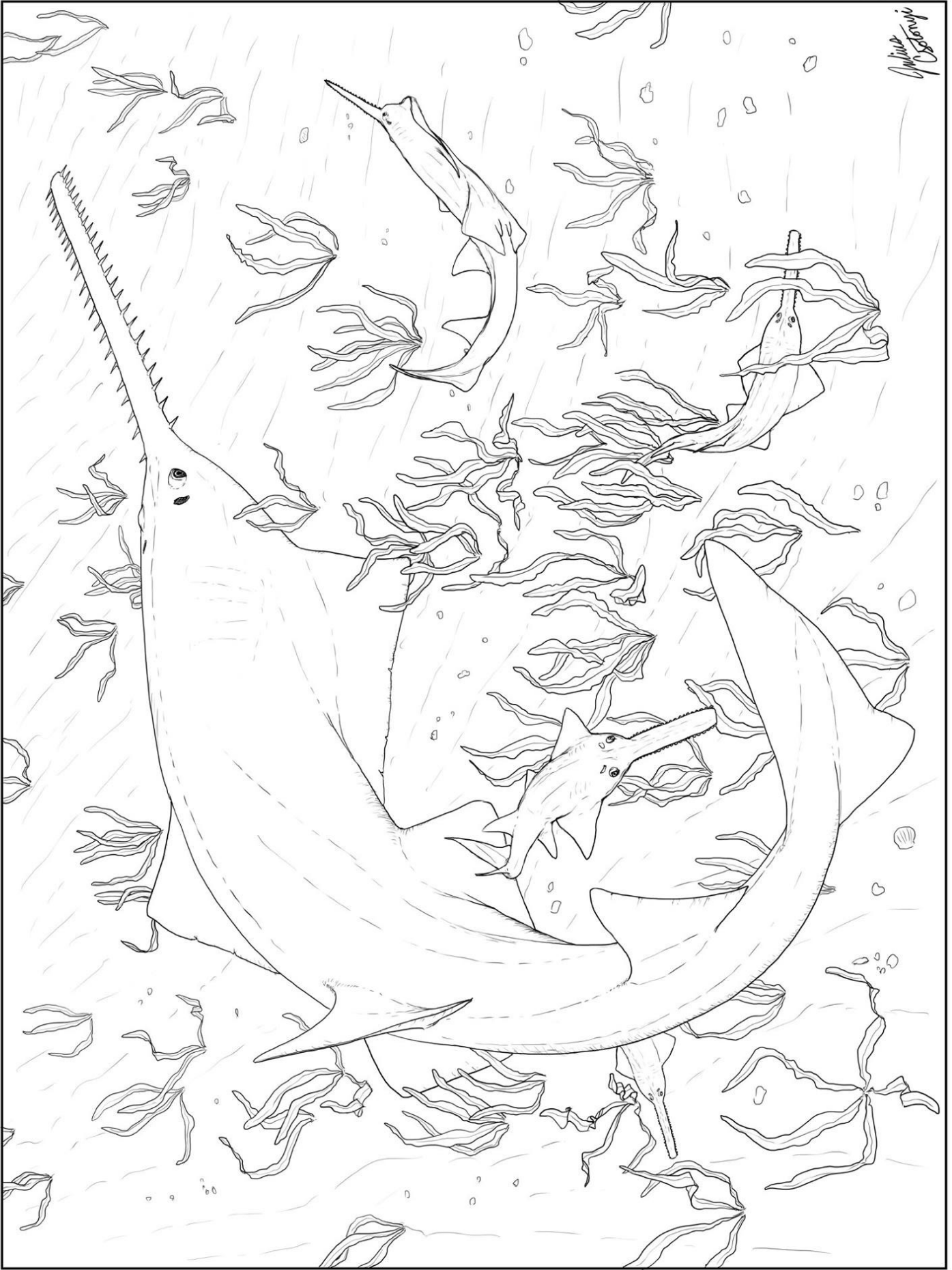
The **longfin mako shark** (*Isurus paucus*) is a lesser known close relative of the fastest known shark, and possesses impressively long pectoral fins, similar to those of a blue shark. The International Union for Conservation of Nature lists it as 'Endangered'.

Giant Sharks of the Deep



These represent some of the largest individuals known for each of these species. The International Union for Conservation of Nature lists these species as: Megamouth shark -- 'Least Concern'; Bluntnose sixgill shark -- 'Near Threatened'; Pacific sleeper shark -- 'Data Deficient'; Bigeye sandtiger shark -- 'Least Concern'; Goblin shark -- 'Least Concern'; Prickly shark -- 'Data Deficient'; False catshark -- 'Least Concern'.

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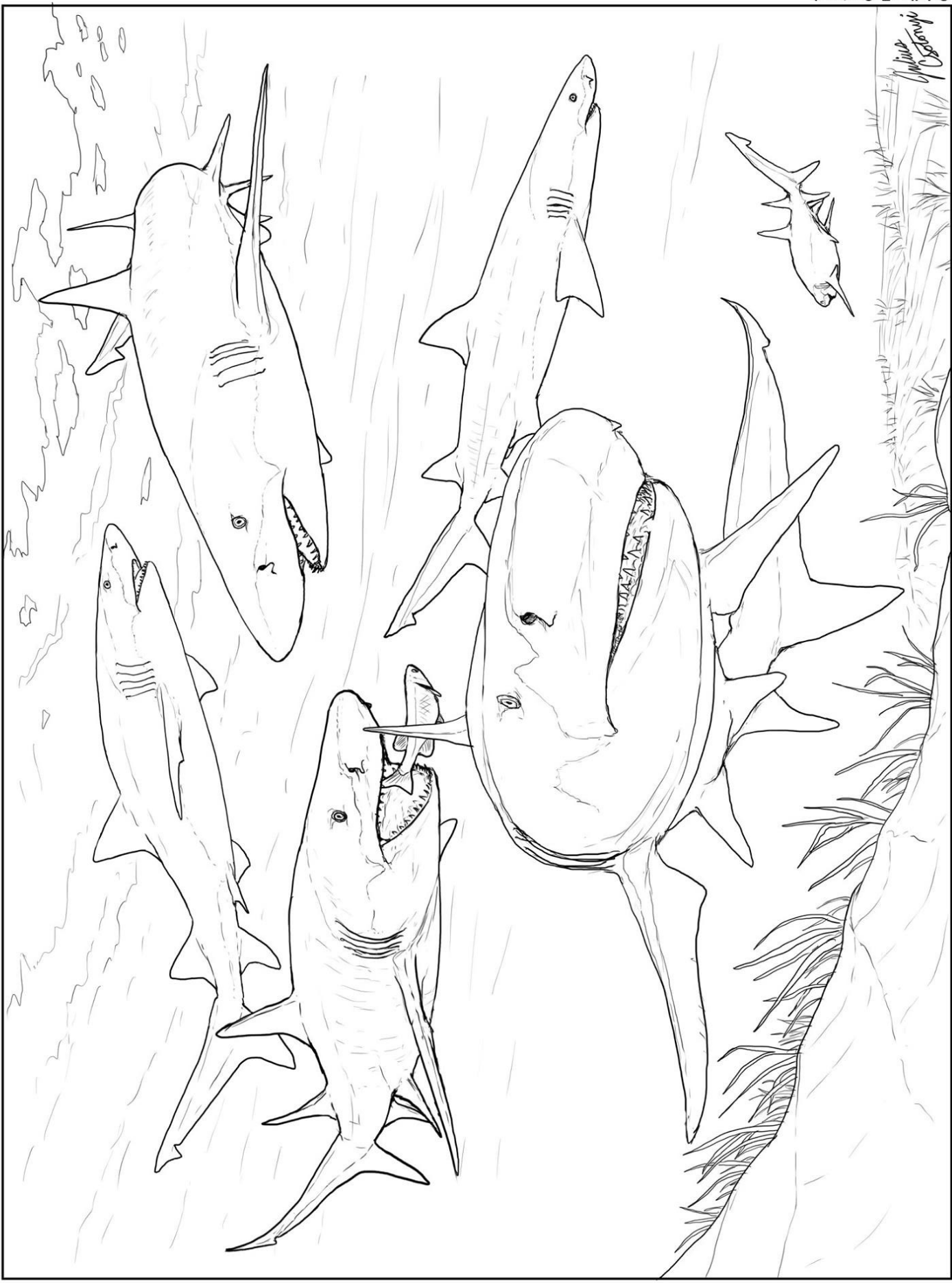
A green sawfish (*Pristis zijsron*), a critically endangered elasmobranch, gives birth to a litter of pups in the Australian shallows.



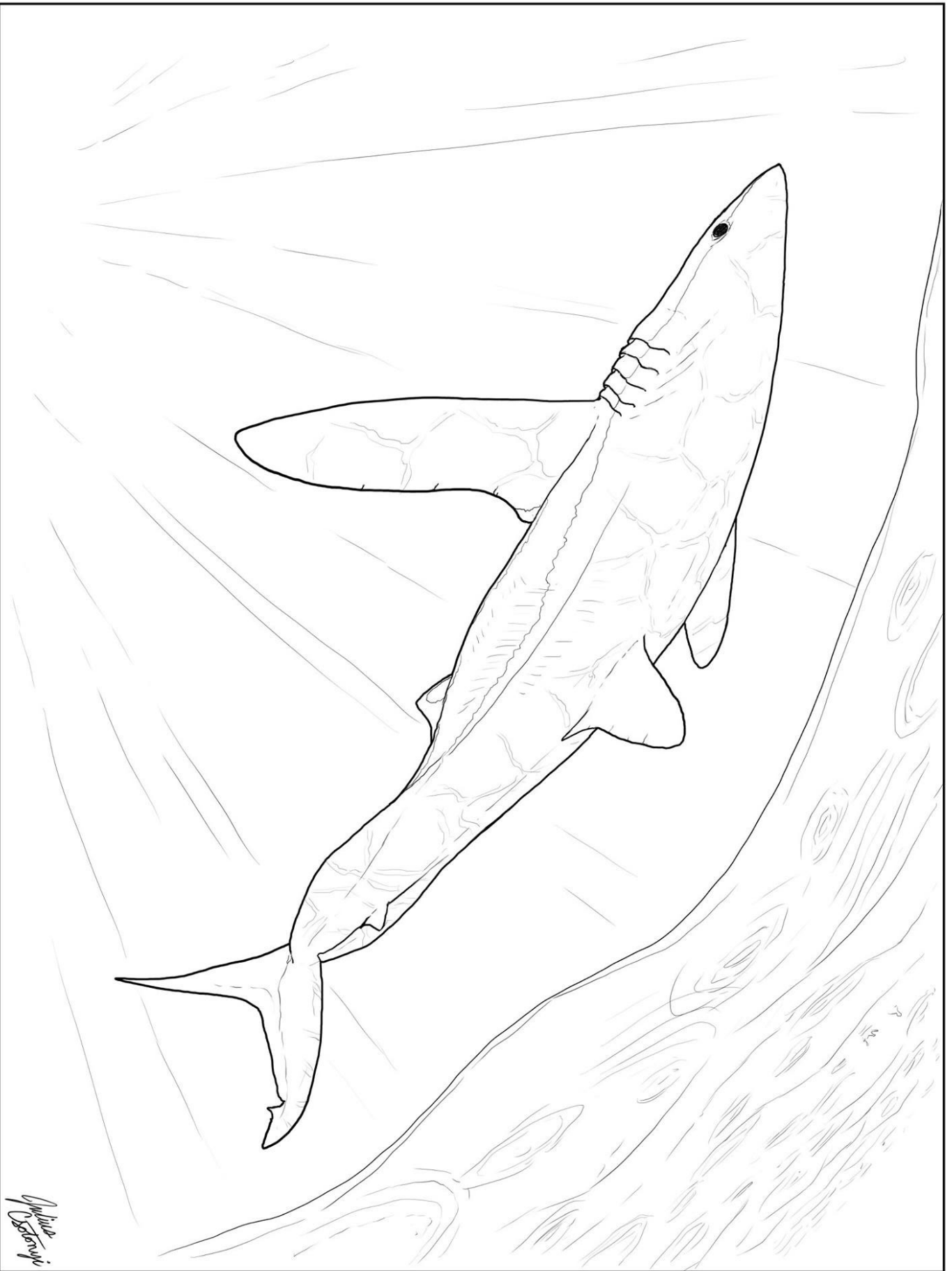
A pair of **largetooth sawfish** (*Pristis pristis*) (top and bottom) swim past a **green sawfish** (*Pristis zijsron*) (middle) resting on the seabed. Both species are critically endangered inhabitants of shallow marine habitats.

Illustration by
Chris G. G. G.

Julius T. Csotonyi



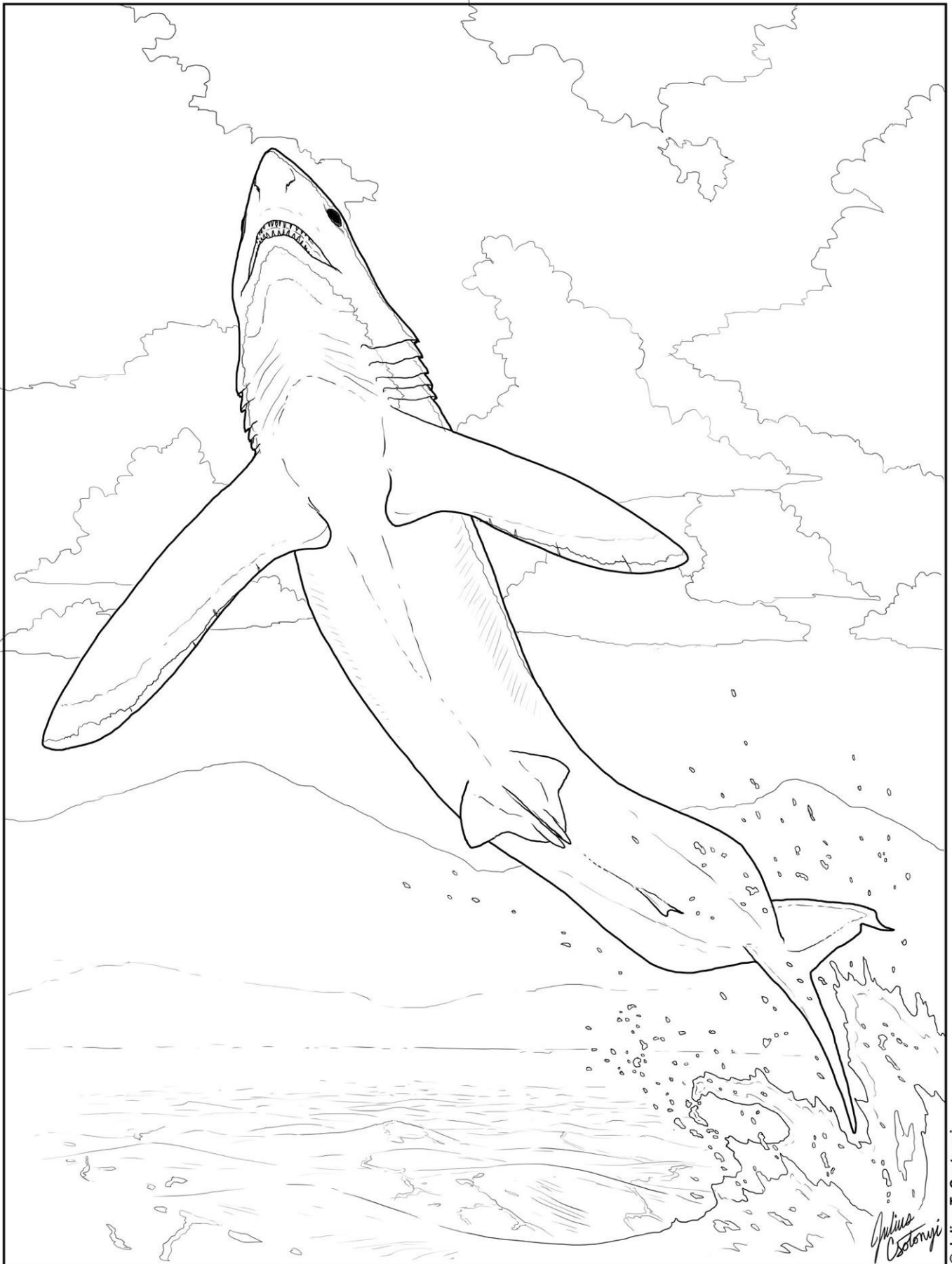
Lemon shark (*Negaprion brevirostris*).



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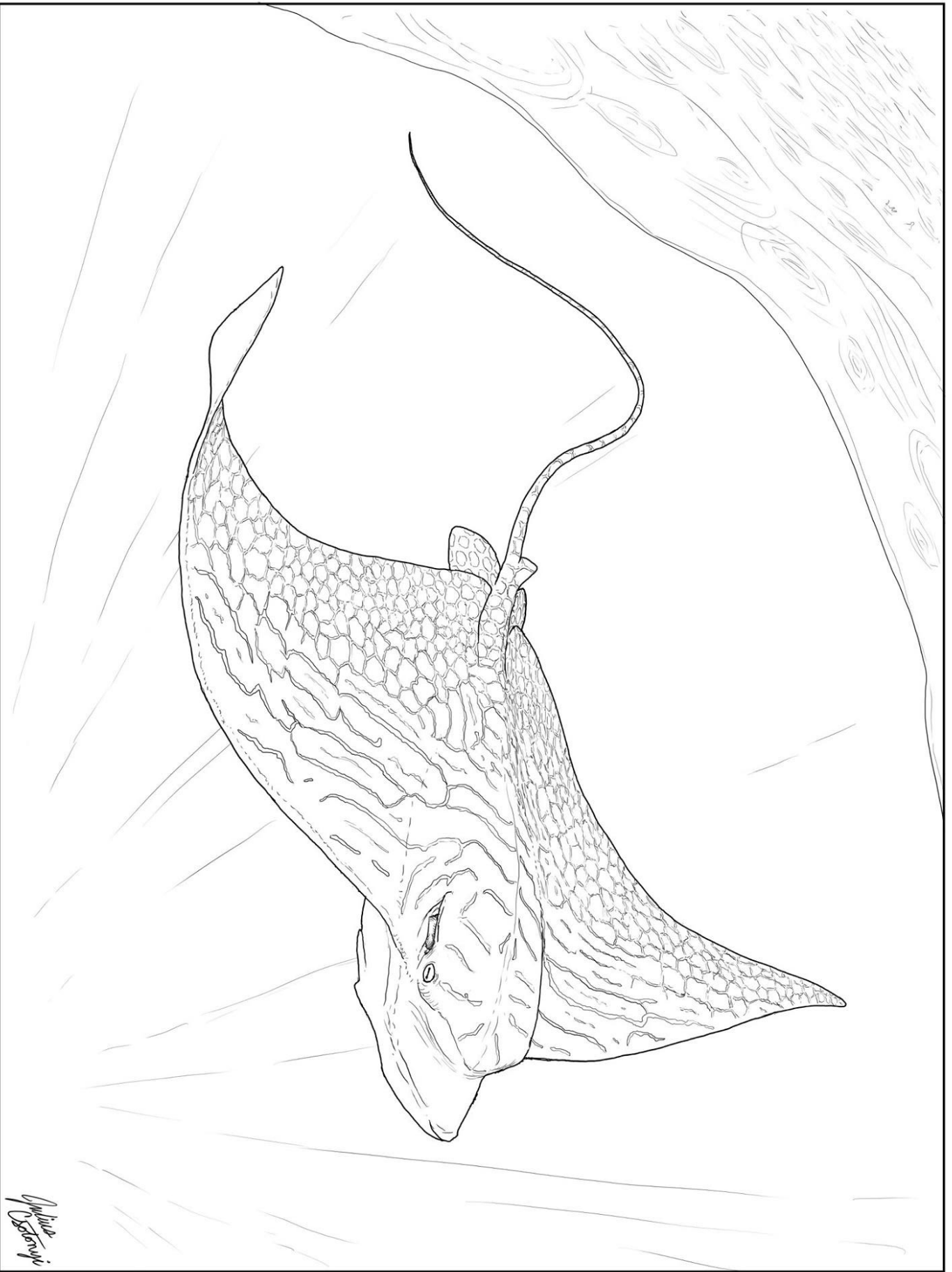
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The **longfin mako shark** (*Isurus paucus*) is a lesser known close relative of the fastest known shark, and possesses impressively long pectoral fins, similar to those of a blue shark. The International Union for Conservation of Nature lists it as 'Endangered'.



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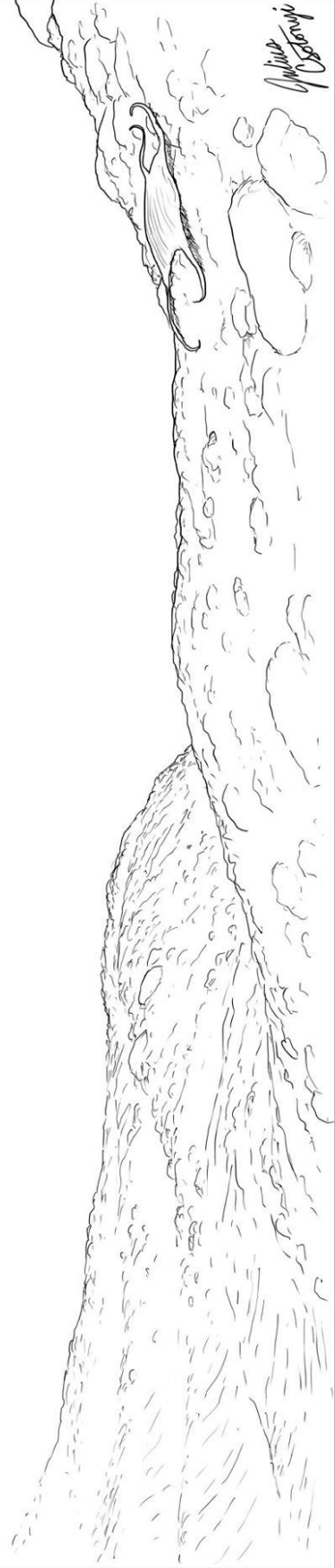
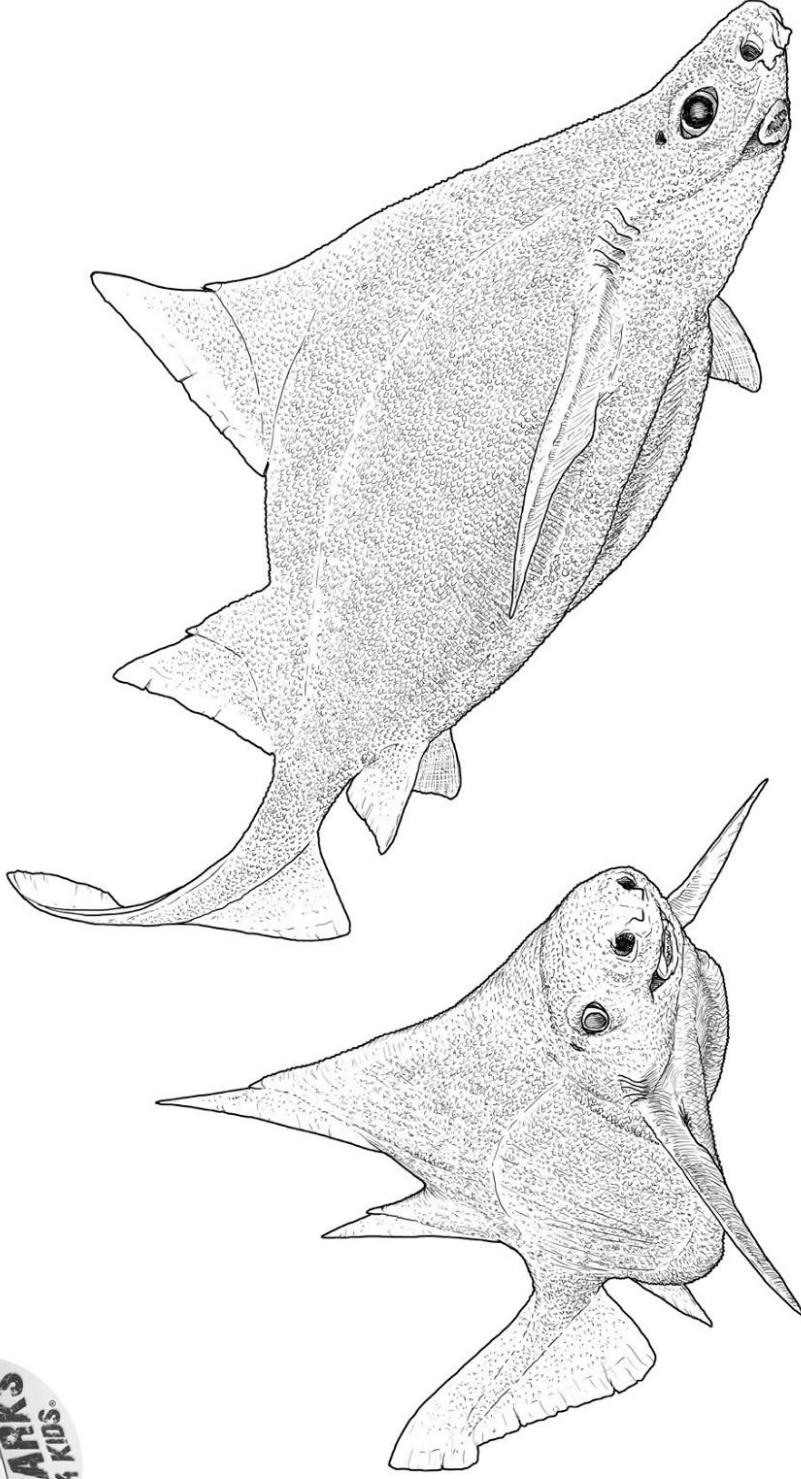
The **longfin mako shark** (*Isurus paucus*) is a lesser known close relative of the fastest known shark, and possesses impressively long pectoral fins, similar to those of a blue shark. The International Union for Conservation of Nature lists it as 'Endangered'.



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The **ornate eagle ray** (*Aetomylaeus vesperilio*) is one of the most intricately patterned rays in the world. The International Union for Conservation of Nature lists it as 'Endangered'.



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The **prickly dogfish** (*Oxynotus bruniensis*), listed as 'Near Threatened' by the International Union for Conservation of Nature's Red List of Threatened Species.

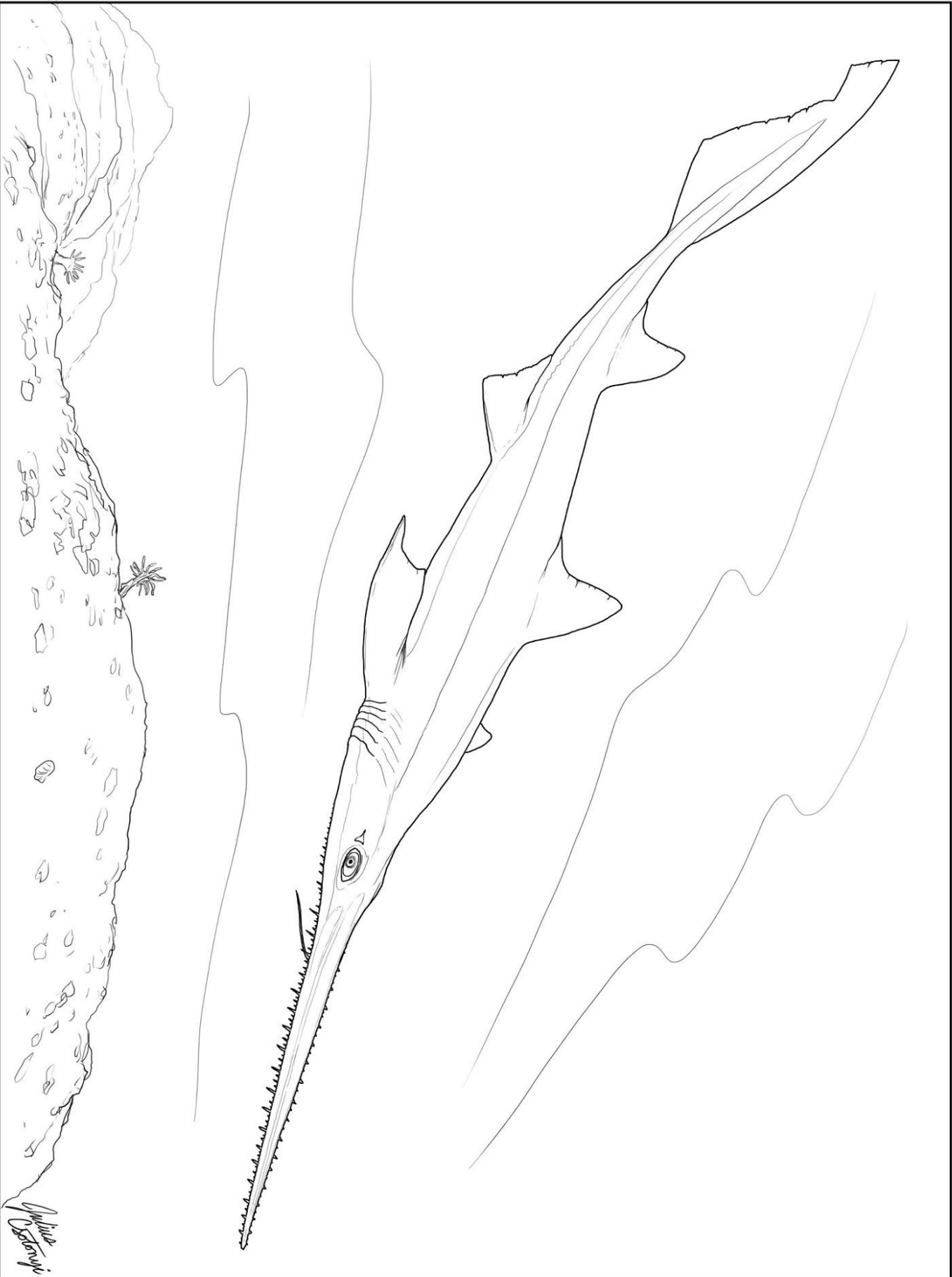


The **salmon shark** (*Lamna ditropis*) was recently observed off Vancouver Island using a floating barnacle-covered log as a 'scratching post', probably to rub parasites off its body.

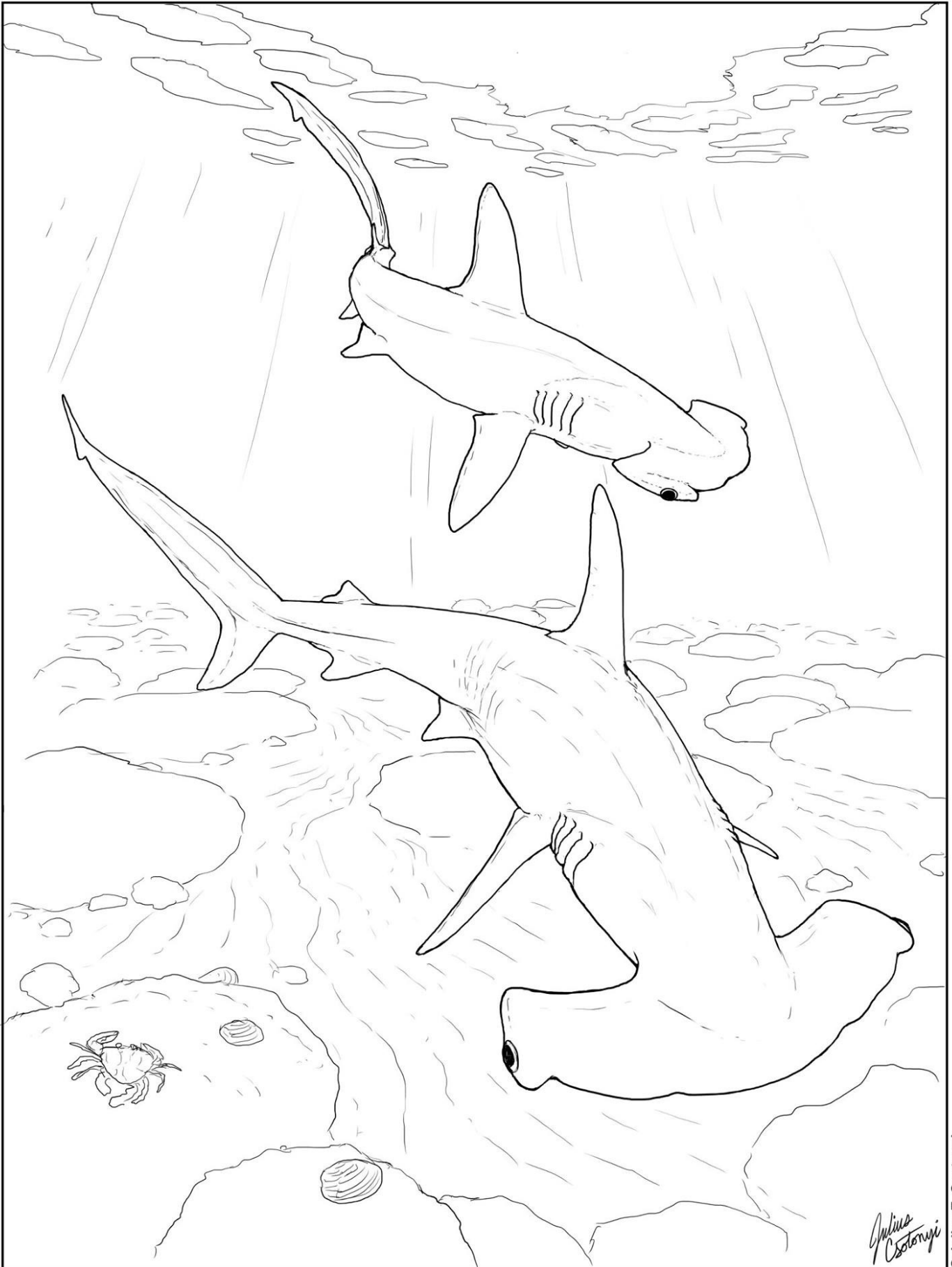


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The **sicklefin lemonshark** (*Negaprion acutidens*) is an Indonesian, southeast Asian and Chinese species that is classified as Vulnerable by the International Union for Conservation of Nature Red List, with a decreasing population.



The **sixgill sawshark** (*Pliotrema warreni*) is one of only eight known species of shark (as of 2019) that possesses more than five gill slits. The International Union for Conservation of Nature lists it as 'Near Threatened'.



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The **smooth hammerhead shark** (*Sphyrna zygaena*) is found in tropical and temperate shallow ocean waters worldwide. It has large litters of up to 50 pups! The International Union for Conservation of Nature lists it as 'Vulnerable', with a decreasing population.



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A trio of hammerhead species, the **smooth hammerhead** (*Sphyrna zygaena*) (left), **great hammerhead** (*Sphyrna mokarran*) (center), and **scalloped hammerhead** (*Sphyrna lewini*) (right).

Thresher sharks



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Common thresher shark (*Alopias vulpinus*)

Pelagic thresher shark (*Alopias pelagicus*)

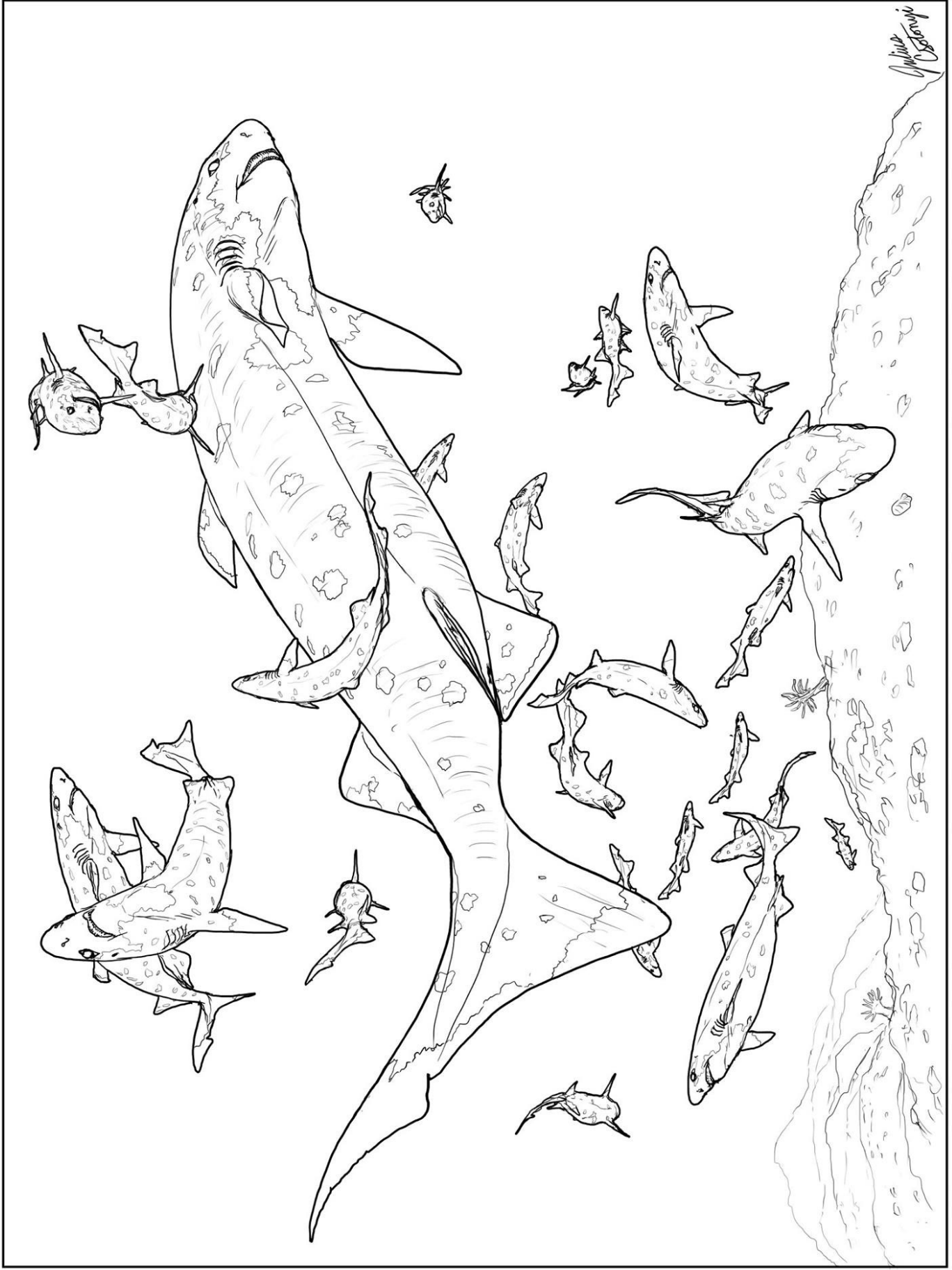
Bigeye thresher shark (*Alopias superciliosus*)

Almaco jack (*Seriola rivoliana*)



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The **viper dogfish** (*Trigonomnathus kabeyai*) has the most amazing protrusible jaws and long, fang-like teeth. It uses these to impale small prey such as this Pacific headlightfish (*Diaphus pacificus*) in a quick motion. The International Union for Conservation of Nature lists it as 'Data Deficient'. More research is required to understand how stable are its populations.



A splotchy whitetail dogfish (*Scymnodon tias albicauda*) gives live birth to a large litter of pups in the far southern deep ocean. This species can birth up to 59 pups at a time. The International Union for Conservation of Nature lists it as 'Data Deficient'.

**For more information and additional educational resources,
please contact:**

Atlantic States Marine Fisheries Commission

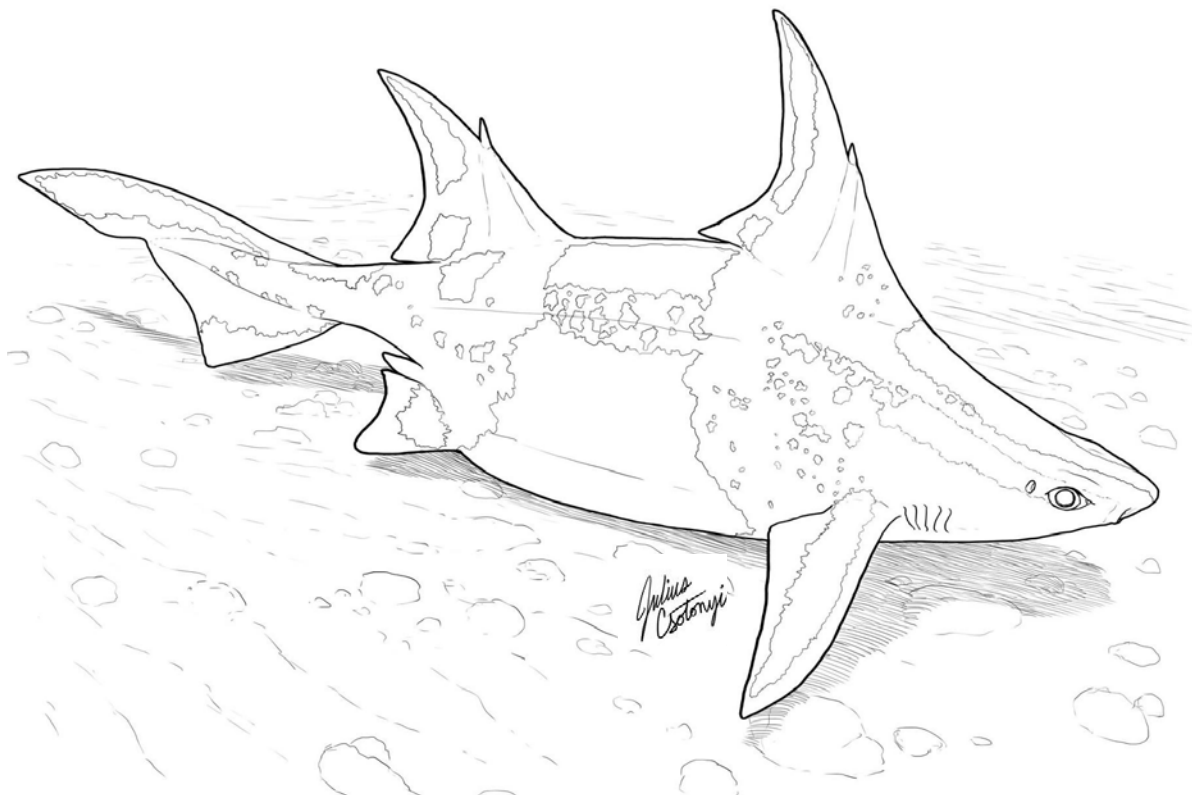
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THE WORLD OF SHARKS ILLUSTRATIONS BY JULIUS CSOTONYI

JULIUS THOMAS CSOTONYI (born October 11, 1973) is a Canadian paleoartist and natural history illustrator living in Winnipeg, Manitoba, Canada. He specializes in photo-realistic restorations of dinosaurs, paleo-environments and extinct animals. His techniques encompass both traditional and digital media. His art is included in museum displays in many countries. Csotonyi also created the design of the reverse side of the commemorative 25 dollar silver Royal Canadian Mint coin called 50th Anniversary of the Canadian Flag. Julius created these coloring sheets to increase awareness about biodiversity, especially species in need of conservation. For more information about the artist go to <http://csotonyi.com/>.