



Identification Guide to **SHARKS** *of Mississippi*

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PREFACE

This guide was developed to assist anglers, charter boat captains, marine enforcement officers, biologists, commercial fishers and others in the identification of sharks that occur in or near the coastal and marine waters of Mississippi. Species included in the guide were selected based on their relative occurrence and probability of encounter within Mississippi's inshore (north of the barrier islands) and offshore (south of the barrier islands) waters.

The guide provides a shark illustration which highlights external anatomical features used to identify the various species. An identification "key," photographs, descriptions of unique physical characteristics, and general information for each species assist users in correctly identifying the sharks, particularly similar species that are easily confused.

It is the intent of the authors that this user-friendly guide serve as a useful field identification aid as well as a source of general information on local sharks. Considering the overfished status of numerous shark populations, individuals who catch sharks, particularly female sharks during pupping season, might choose to release them unharmed once they are identified by quick reference to this guide. It is anticipated that the guide represents the initial step in the development of an angler-based, cooperative tagging program for sharks in Mississippi waters.

This guide was developed with a grant from the Mississippi Department of Marine Resources and the U.S. Fish and Wildlife Service, Sport Fish Restoration Program.

SHARKS PRESENTED IN THIS GUIDE

Bonnethead	<i>Sphyrna tiburo</i>	Dusky shark.....	<i>Carcharhinus obscurus</i>
Scalloped hammerhead.....	<i>Sphyrna lewini</i>	Silky shark	<i>Carcharhinus falciformis</i>
Great hammerhead.....	<i>Sphyrna mokarran</i>	Atlantic sharpnose shark ..	<i>Rhizoprionodon terraenovae</i>
Tiger shark.....	<i>Galeocerdo cuvier</i>	Blacknose shark.....	<i>Carcharhinus acronotus</i>
Lemon shark.....	<i>Negaprion brevirostris</i>	Finetooth shark	<i>Carcharhinus isodon</i>
Bull shark	<i>Carcharhinus leucas</i>	Spinner shark	<i>Carcharhinus brevipinna</i>
Shortfin mako	<i>Isurus oxyrinchus</i>	Blacktip shark	<i>Carcharhinus limbatus</i>
Sandbar shark.....	<i>Carcharhinus plumbeus</i>		



GENERAL REPRODUCTIVE INFORMATION ON SHARKS IN THIS GUIDE

Common Name	Female Size at Maturity (feet)**	Litter Size**	Size at Birth (inches)**	Pupping Season
• <i>Small Coastal Species</i>				
Atlantic sharpnose	3	1 – 7	13 – 15	May/June
Finetooth	4 – 5	1 – 6	18 – 20	May/June
Bonnethead	3	1 – 16	14 – 16	Aug/Sept
Blacknose	3 – 4	3 – 6	15 – 20	May/June
• <i>Large Coastal Species</i>				
Blacktip	5 – 6	1 – 10	18 – 23	May/June
Spinner	6 – 7	3 – 15	24 – 30	May/June
Bull	7 – 8	1 – 15	22 – 32	May/June
Sandbar	5 – 6	1 – 14	22 – 30	May/June
Silky	7 – 8	2 – 14	28 – 34	May/June
Dusky *	9 – 10	3 – 14	27 – 39	May/June
Tiger	11 – 12	10 – 82	20 – 30	May/June
Lemon	7 – 8	4 – 17	24 – 26	May/Aug
Scalloped hammerhead	7 – 8	15 – 31	17 – 22	May/June
Great hammerhead	9 – 10	13 – 42	20 – 28	Aug/Sept
• <i>Pelagic Species</i>				
Shortfin mako	9 – 10	8 – 10	24 – 27	Unknown

• *Shark Management Category*
Sharks are managed by state and federal regulations.

* *Prohibited Species*

** *Source: J.D. McEachran and J.D. Fechhelm. 1998. Fishes of the Gulf of Mexico, Vol. 1: Myxiniiformes to Gasterosteiformes. University of Texas Press, Austin, 1112 pp.*

REFERENCE POINTS FOR TERMS IN GUIDE

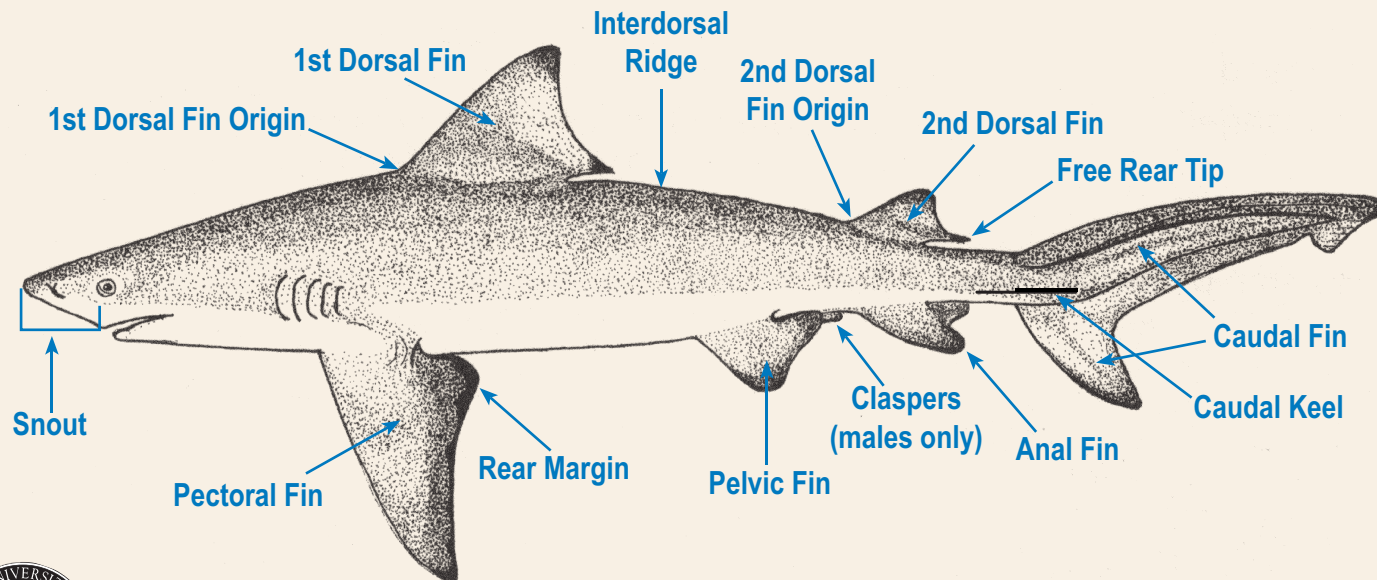


Illustration by Joe Jewell



GULF COAST RESEARCH LABORATORY

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IDENTIFICATION KEY TO THE SHARKS IN THIS GUIDE

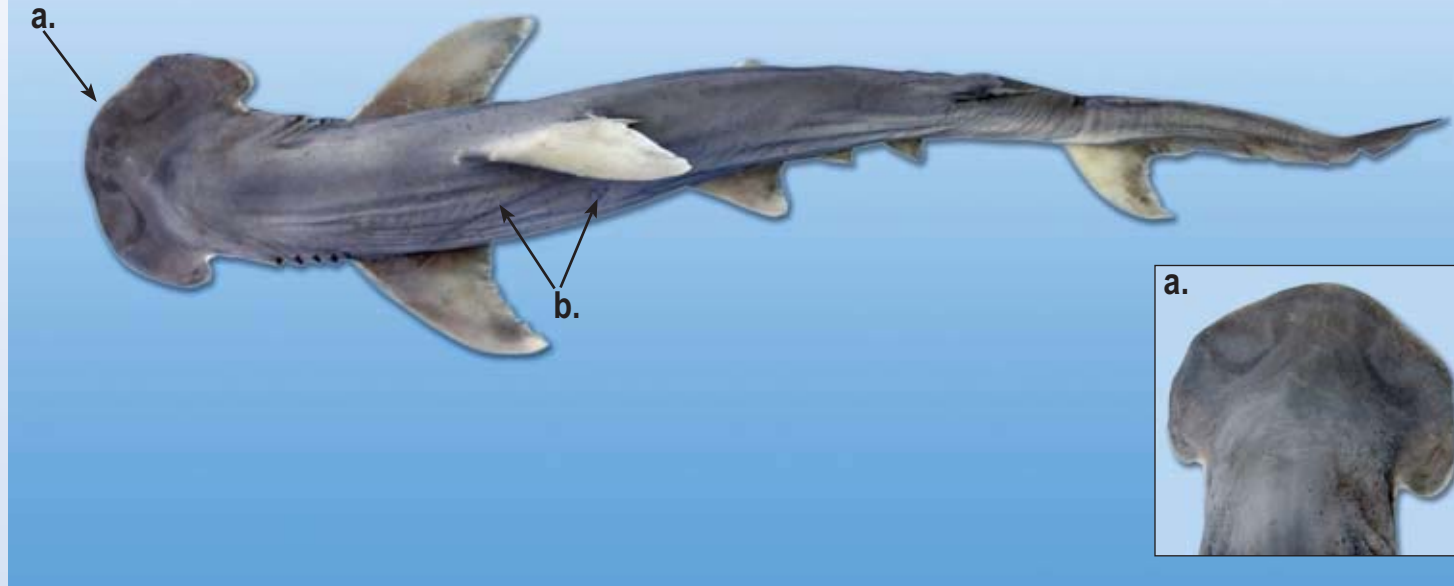
This key contains a series of paired descriptive options (1-14) to use in the identification of sharks. Beginning with #1, select the option (a or b) that best applies to your specimen. The number shown at the end of your chosen option will guide you through the key to the next pair of options you must consider. Continue this stepwise process until you identify the correct name of your shark.

1. a) Head shovel or hammer shaped.....2
b) Head rounded to pointed4
2. a) Head shovel shaped with no center indentation [Bonnethead](#) (p.7)
b) Head hammer shaped with center indentation3
3. a) Front margin of head broadly arched with center indentation and two shallow notches on each side; pelvic fins with straight rear margin [Scalloped hammerhead](#) (p.9)
b) Front margin of head nearly straight with center indentation and one shallow notch on each side; pelvic fins with curved rear margin [Great hammerhead](#) (p.11)
4. a) Snout short and bluntly rounded5
b) Snout elongated and moderately rounded to pointed7
5. a) Black spots or stripes on dorsal surface; teeth serrated and deeply notched..... [Tiger](#) (p.13)
b) Body uniform in color; teeth not deeply notched6
6. a) 1st and 2nd dorsal fins approximately equal in size; body yellowish-green to brown in color [Lemon](#) (p.15)
b) 1st dorsal fin much larger than 2nd dorsal fin; 1st dorsal fin high, triangular, and originates over middle of pectoral fin; body robust and dark gray in color [Bull](#) (p.17)
7. a) Top and bottom lobes of caudal fin approximately equal in size; body deep blue in color; teeth are long and blade-like, with no serrations; caudal keel present [Shortfin mako](#) (p.19)
b) Top lobe of caudal fin longer than bottom lobe; no caudal keel8

8. a) Interdorsal ridge present9
b) Interdorsal ridge absent 11
9. a) 1st dorsal fin high, triangular, and originates over middle of pectoral fin..... [Sandbar](#) (p.21)
b) 1st dorsal fin moderately rounded and originates over or well behind rear margin of pectoral fin 10
10. a) 1st dorsal fin originates over rear margin of pectoral fin; pectoral fin with slightly curved rear margin..... [Dusky](#) (p.23)
b) 1st dorsal fin originates well behind rear margin of pectoral fin; 2nd dorsal fin has long free tip.....[Silky](#) (p.25)
11. a) Origin of 2nd dorsal fin about middle of anal fin base; white spots on dorsal surface of individuals greater than 23" total length[Atlantic sharpnose](#) (p.27)
b) Origin of 2nd dorsal fin aligns with origin of anal fin; white spots absent on dorsal surface 12
12. a) Snout with dusky blotch at tip[Blacknose](#) (p.29)
b) Snout without dusky blotch at tip 13
13. a) Fins not black tipped; 1st dorsal fin originates over rear margin of pectoral fin; body bluish gray..... [Finetooth](#) (p.31)
b) All or most of the fins black tipped..... 14
14. a) 1st dorsal fin originates behind rear margin of pectoral fin; all fins black tipped; snout longer than mouth width[Spinner](#) (p.33)
b) 1st dorsal fin originates over pectoral fin, sometimes over the rear margin; all fins black tipped except anal fin; snout shorter than mouth width[Blacktip](#) (p.35)



BONNETHEAD



SIMILAR SPECIES



Scalloped hammerhead



Great hammerhead

Key Characteristics

- a. Shovel-shaped head with no center indentation*
- b. Small scattered black spots on dorsal surface*

Management Category

Small Coastal

Maximum Size 5 ft.

Common Size 2 to 4 ft.

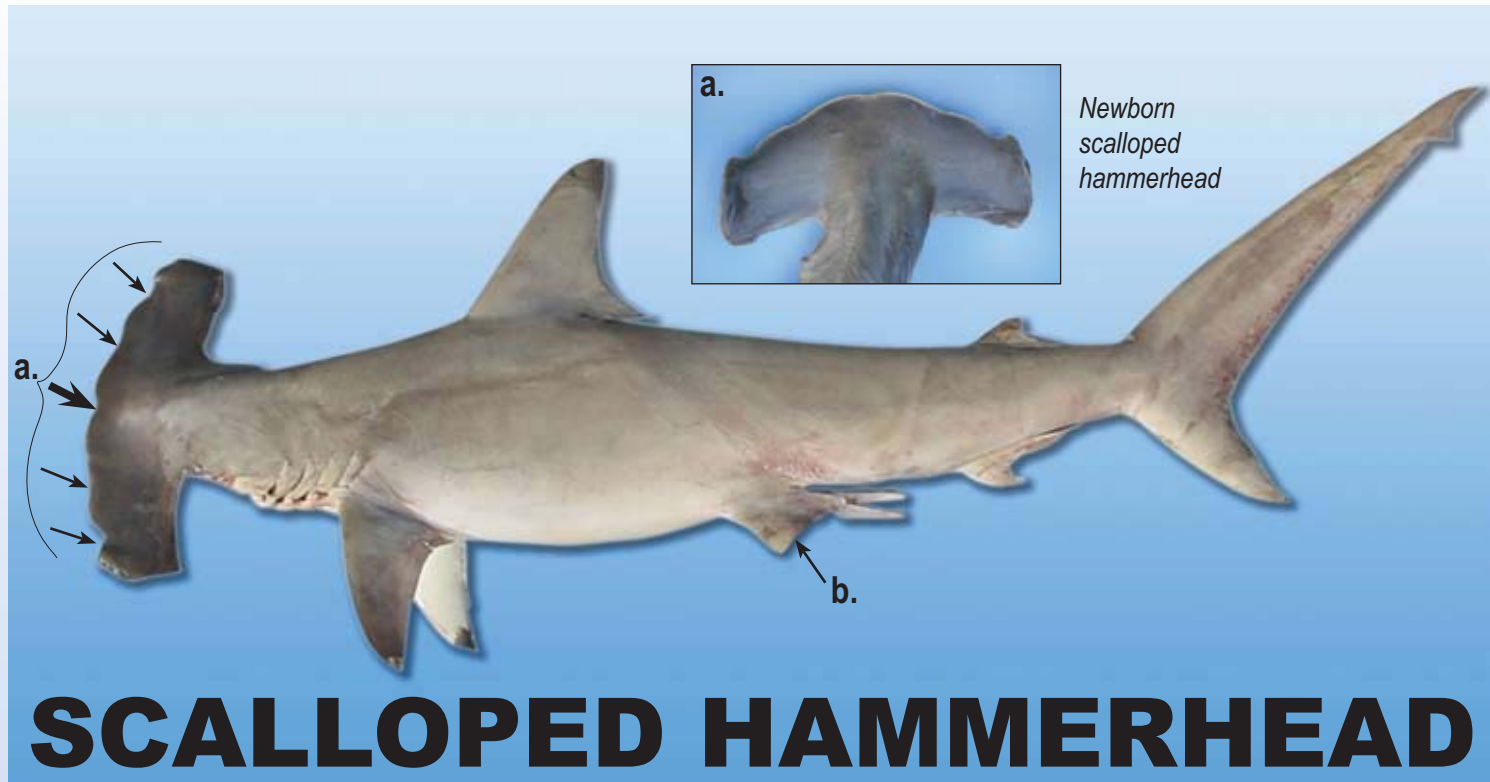
Abundance

Inshore Medium / Offshore Rare

Similar Species

See adjacent photos





SIMILAR SPECIES



Bonnethead



Great hammerhead

Key Characteristics

- a. Front edge of head broadly arched with center indentation and two shallow notches on each side
Head of newborn slightly curved
- b. Pelvic fins with straight rear margins

Management Category

Large Coastal

Maximum Size 12 ft.

Common Size 5.5 to 8.5 ft.

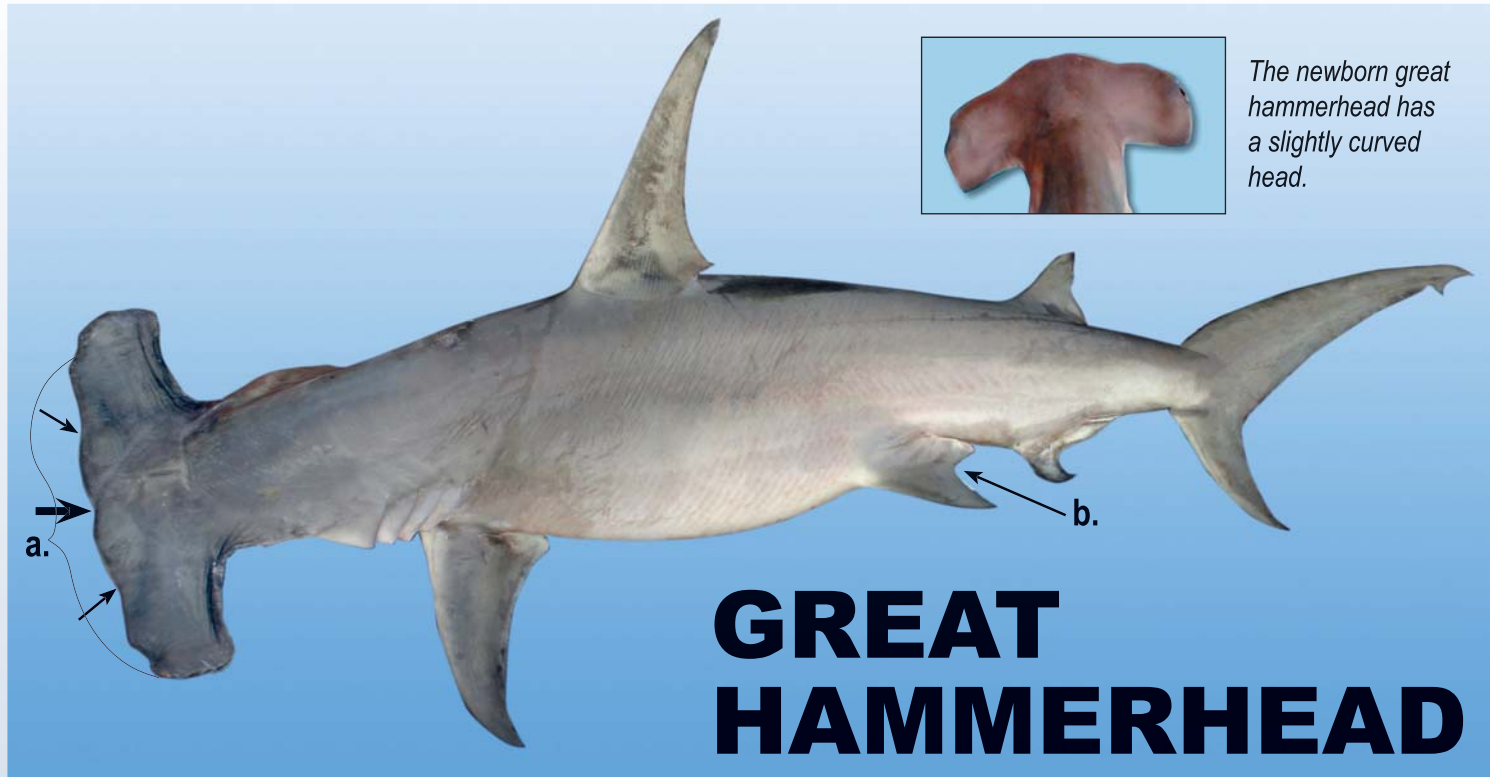
Abundance

Inshore Rare / Offshore Medium

Similar Species

See adjacent photos





SIMILAR SPECIES



Bonnethead



Adult scalloped hammerhead

Key Characteristics

- a. Front margin of head nearly straight with center indentation and one shallow notch on each side
- b. Pelvic fins with curved rear margin

Management Category

Large Coastal

Maximum Size 18.5 ft.

Common Size 7 to 10 ft.

Abundance

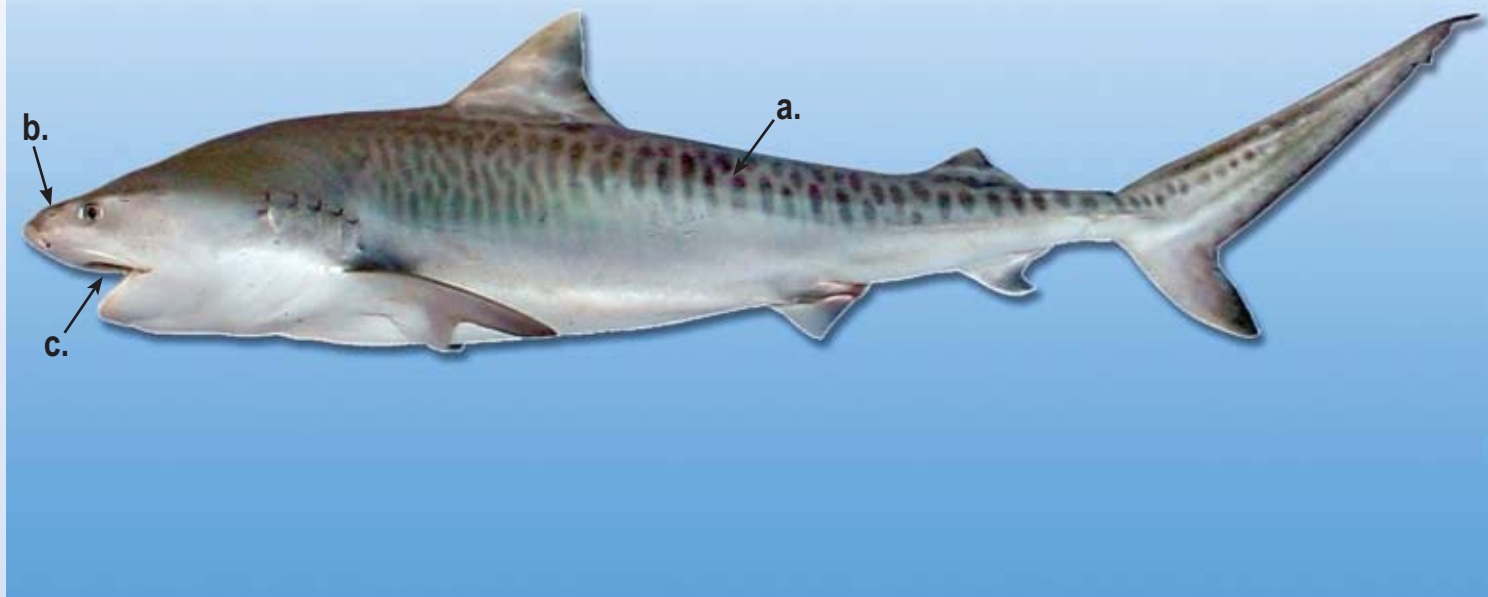
Inshore Rare / Offshore Rare

Similar Species

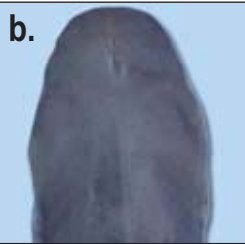
See adjacent photos



TIGER



FEATURES



Key Characteristics

- a. Black spots or stripes on dorsal surface
- b. Snout short, bluntly rounded and wide
- c. Teeth serrated, deeply notched

Management Category

Large Coastal

Maximum Size 20 ft.

Common Size 4 to 9 ft.

Abundance

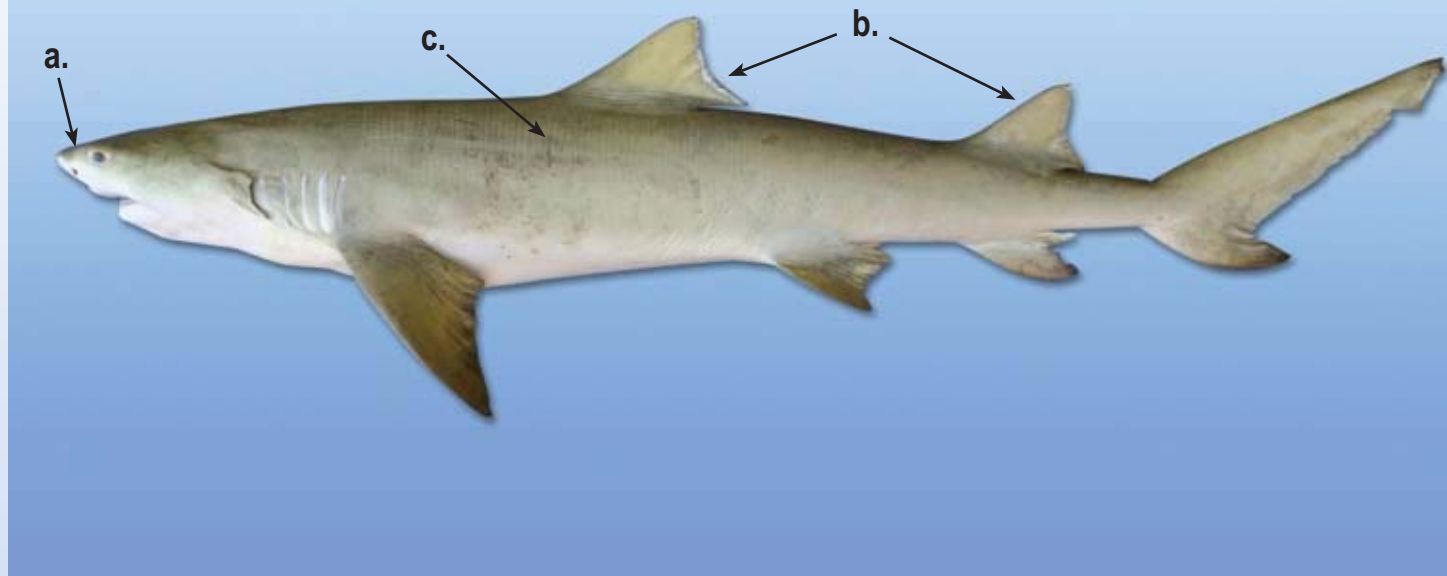
Inshore Rare / Offshore Medium

Similar Species

None

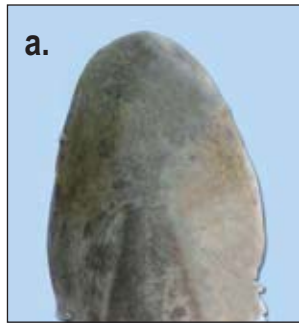


LEMON



FEATURE

a.



SIMILAR SPECIES



Nurse shark, *Ginglymostomata cirratum*

Key Characteristics

- a. Snout short and blunt
- b. 1st and 2nd dorsal fin of similar size
- c. Body color yellowish-green to brown

Management Category

Large Coastal

Maximum Size 11 ft.

Common Size 4 to 7 ft.

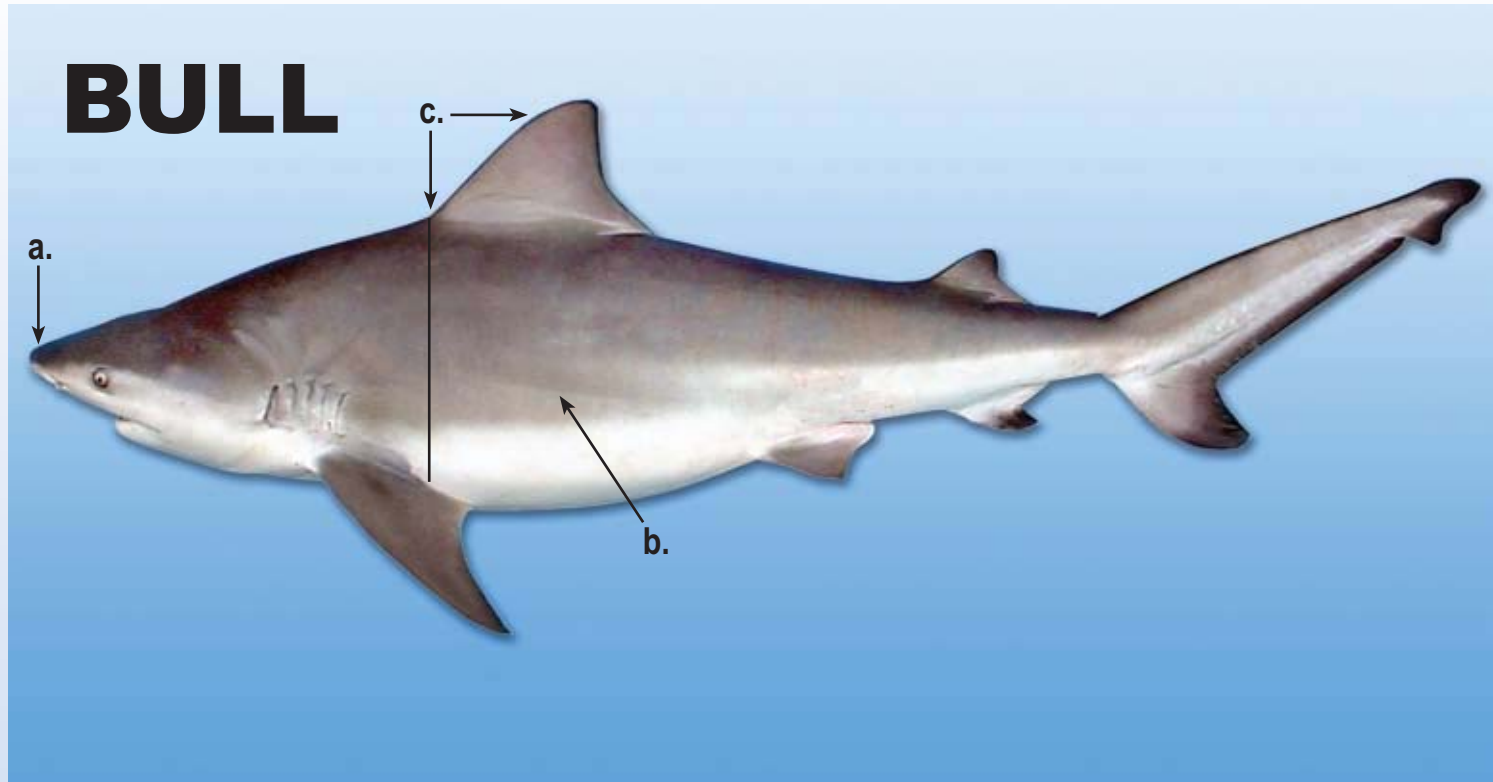
Abundance

Inshore Rare / Offshore Rare

Similar Species

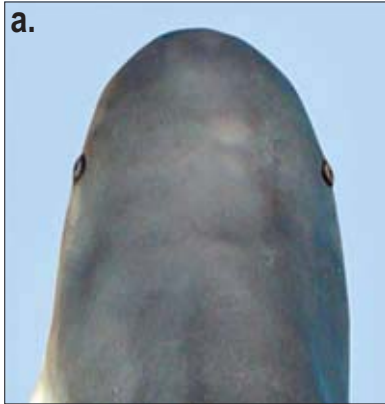
See adjacent photo





FEATURE

a.



Key Characteristics

- a. Snout short, blunt and rounded
 - b. Body robust
 - c. 1st dorsal fin high and triangular; originates over middle of pectoral fin
- *no interdorsal ridge

Management Category

Large Coastal

Maximum Size 11.5 ft.

Common Size 3 to 6 ft.

Abundance

Inshore High / Offshore Medium

Similar Species

Sandbar and Blacktip



SHORTFIN MAKO



FEATURE



Teeth long and pointed

Key Characteristics

- a. Snout conical and pointed*
- b. Top and bottom lobes of caudal fin of similar size*
- c. Body color deep blue*
- d. Caudal keel*

Management Category

Pelagic

Maximum Size 13 ft.

Common Size 6 to 9 ft.

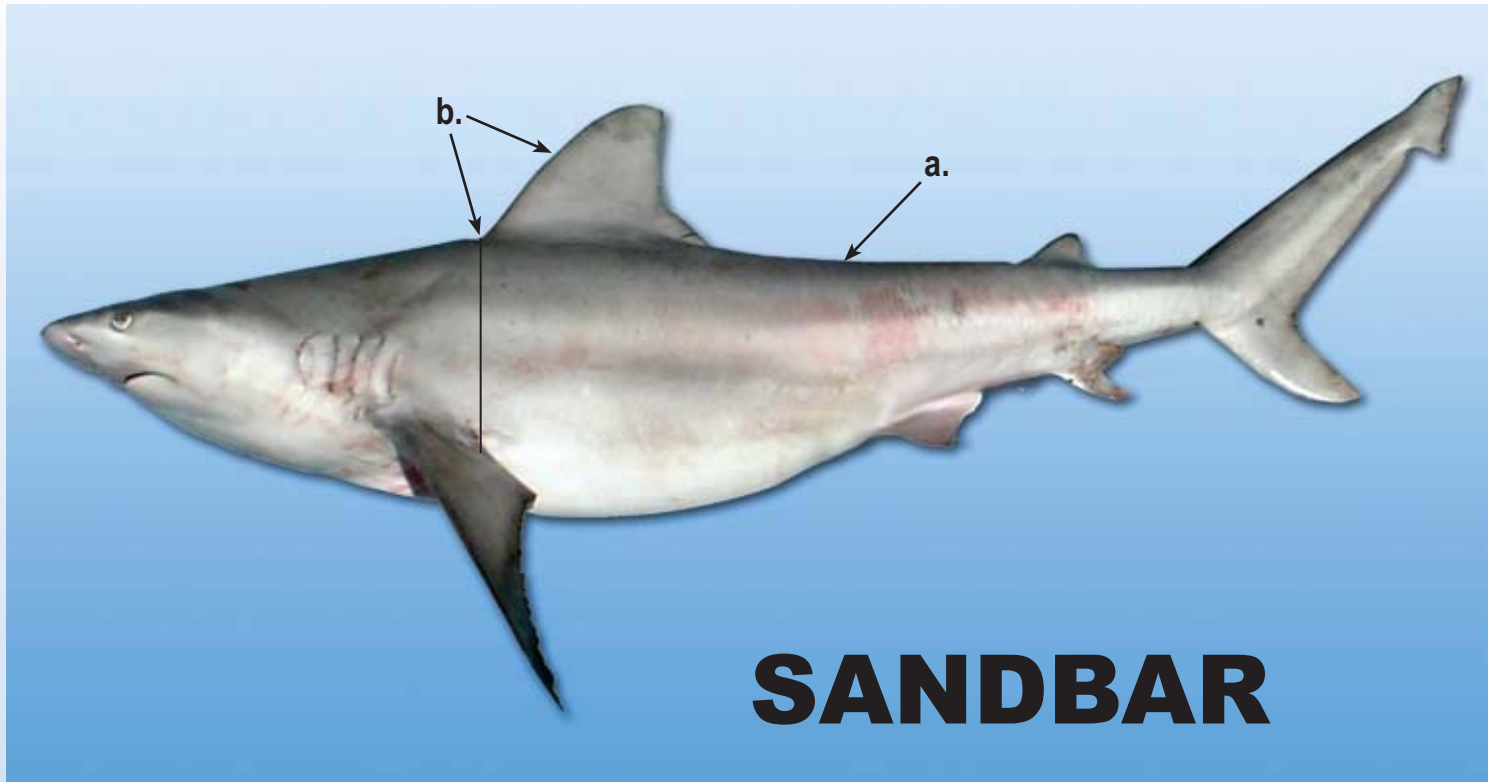
Abundance

Inshore Rare / Offshore Rare

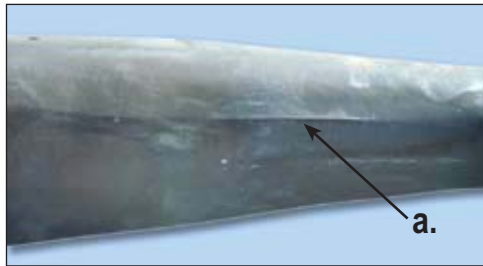
Similar Species

None





FEATURE



Key Characteristics

- a. Interdorsal ridge
- b. 1st dorsal fin high, triangular; originates over middle of pectoral fin

Management Category

Large Coastal

Maximum Size 8 ft.

Common Size 3 to 6.5 ft.

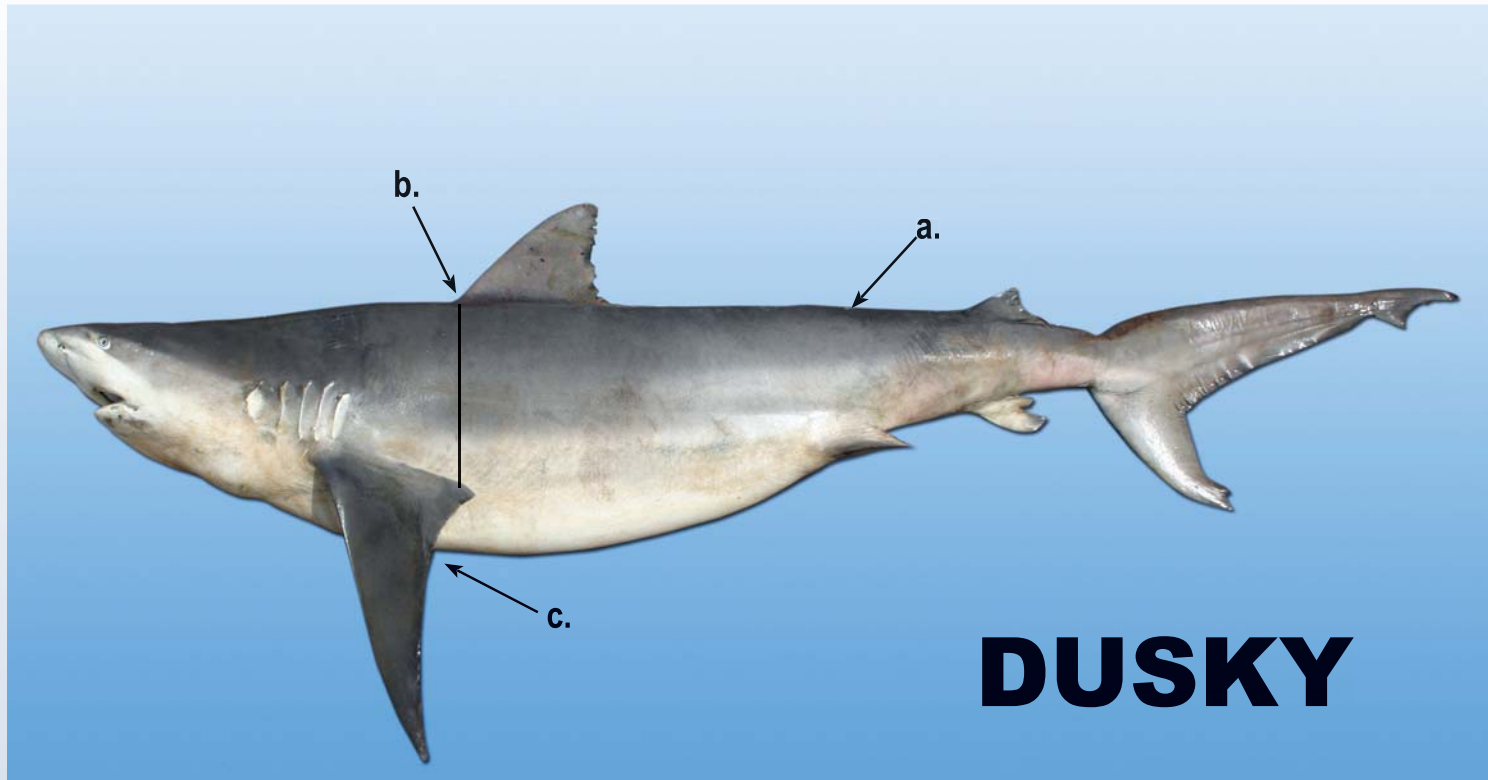
Abundance

Inshore Rare / Offshore Medium

Similar Species

Bull and Dusky





FEATURE



Key Characteristics

- a. Interdorsal ridge*
- b. Origin of 1st dorsal fin over rear margin of pectoral fin*
- c. Pectoral fin with curved rear margin*

Management Category

PROHIBITED SPECIES (no possession)

Maximum Size 12 ft.

Common Size 5 to 9 ft.

Abundance

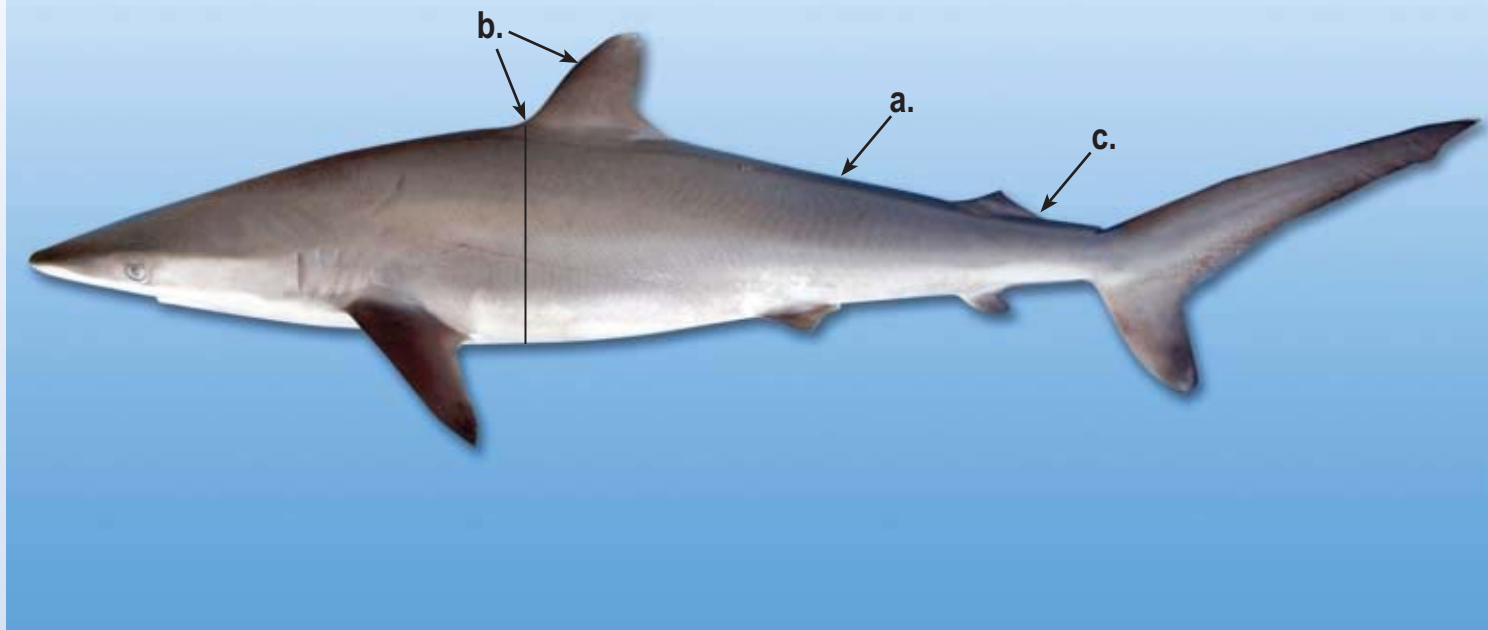
Inshore Rare / Offshore Rare

Similar Species

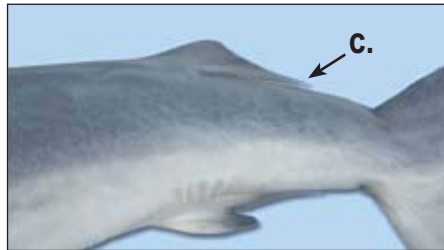
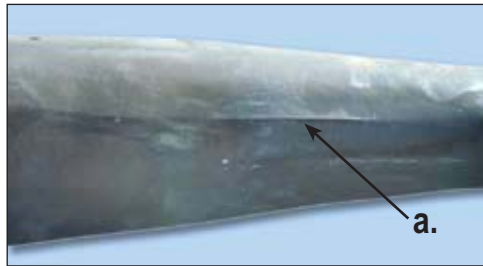
Silky and Sandbar



SILKY



FEATURE



Key Characteristics

- a. Interdorsal ridge*
- b. 1st dorsal fin low, rounded; originates well behind pectoral fin*
- c. 2nd dorsal fin with long free rear tip*

Management Category

Large Coastal

Maximum Size 11 ft.

Common Size 3 to 6 ft.

Abundance

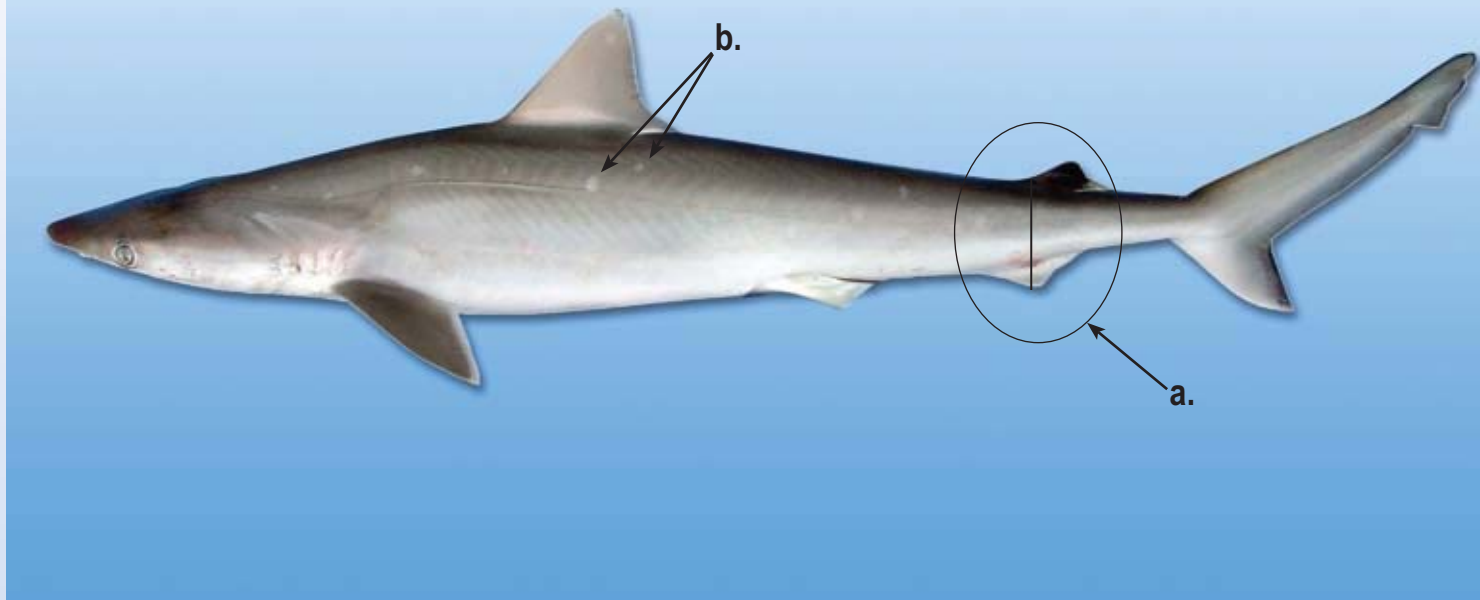
Inshore Rare / Offshore Medium

Similar Species

Dusky



ATLANTIC SHARPNOSE



FEATURE



The young Atlantic sharpnose less than 23 inches does not have white spots on dorsal surface.

SIMILAR SPECIES



*Smalltail Shark, *Carcharhinus porosus*
2nd dorsal fin is not blacktipped.*

Key Characteristics

- a. Origin of 2nd dorsal about mid-base of anal fin*
- b. Several white spots on dorsal surface*

Management Category

Small Coastal

Maximum Size 4 ft.

Common Size 2 to 3.5 ft.

Abundance

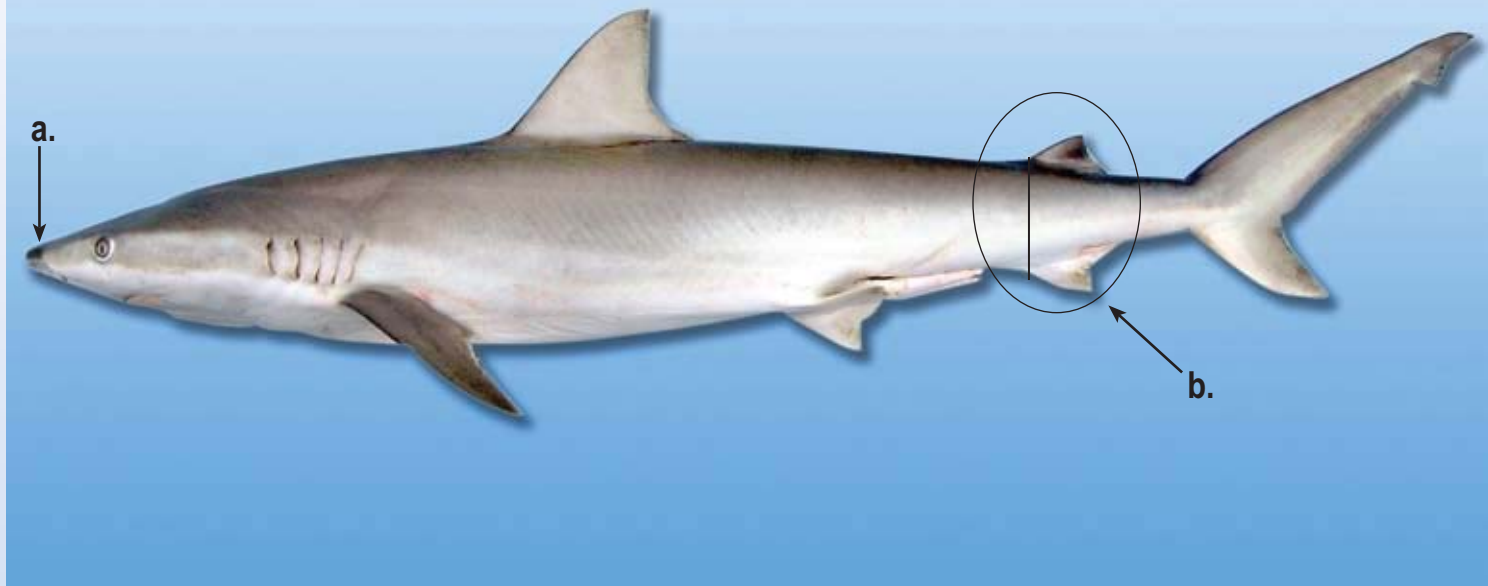
Inshore High / Offshore Medium

Similar Species

*Blacknose, Finetooth, and Smalltail
(see adjacent photo)*



BLACKNOSE



FEATURE



Key Characteristics

- a. Dusky blotch on rounded snout (sometimes faint in adults)
- b. 2nd dorsal fin origin aligns with anal fin origin

Management Category

Small Coastal

Maximum Size 5 ft.

Common Size 2.5 to 4 ft.

Abundance

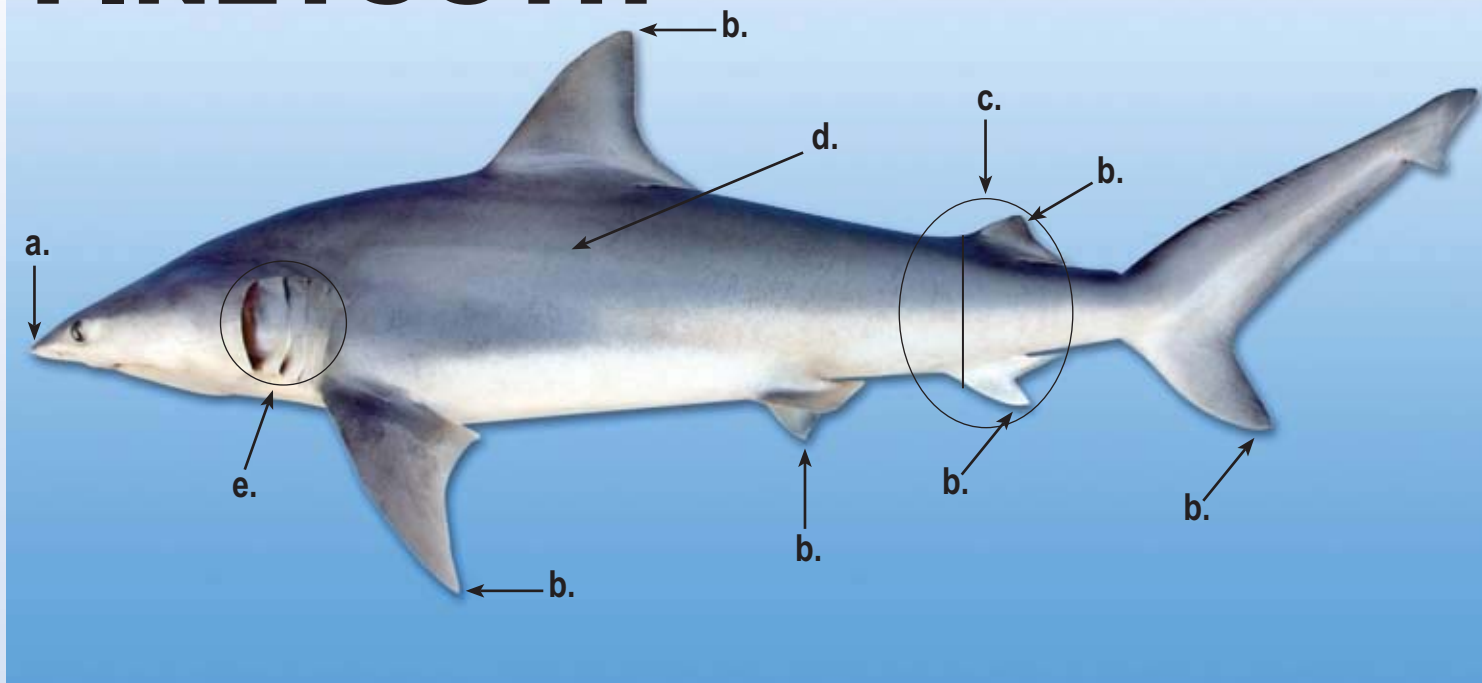
Inshore Rare / Offshore High

Similar Species

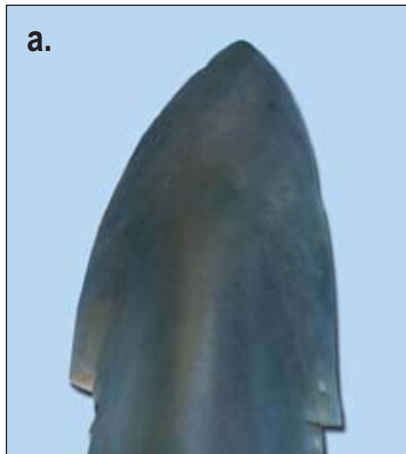
Atlantic sharpnose and Finetooth



FINETOOTH



FEATURE



Key Characteristics

- a. Pointed snout
- b. Fins not black tipped
- c. 2nd dorsal fin origin aligns with anal fin origin
- d. Dorsal surface bluish gray
- e. Long gill slits

Management Category

Small Coastal

Maximum Size 6 ft.

Common Size 2 to 4.5 ft.

Abundance

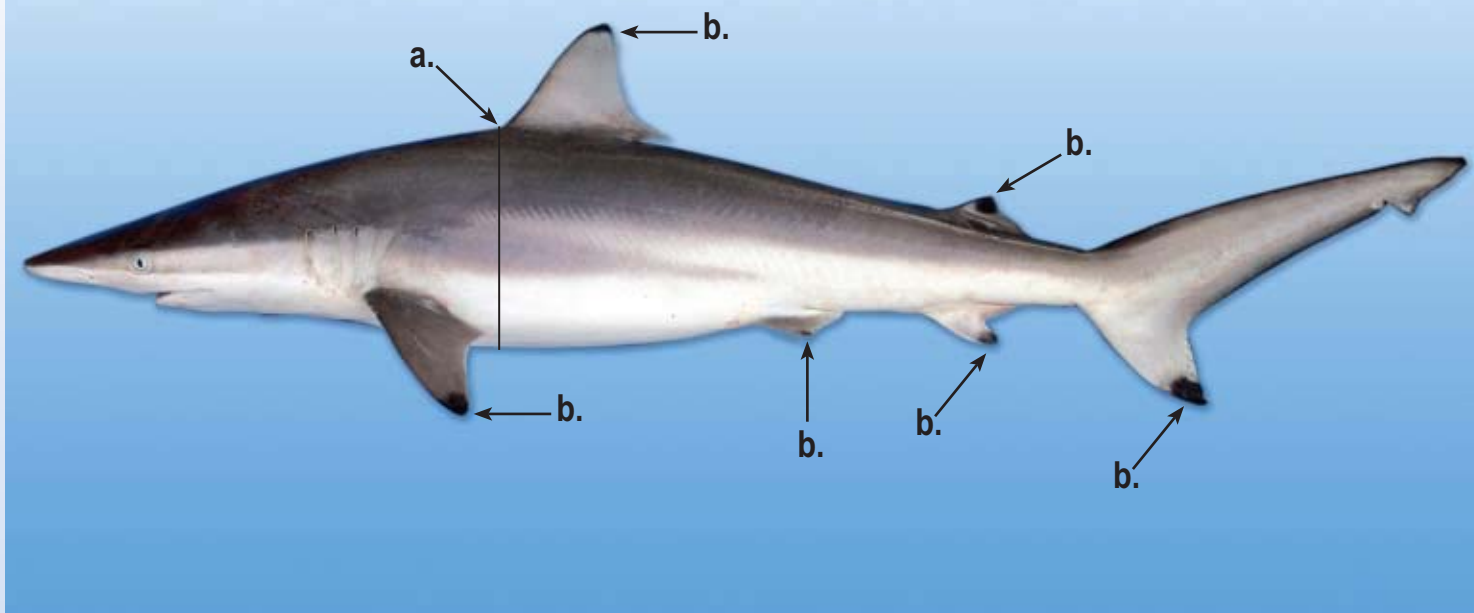
Inshore High / Offshore Rare

Similar Species

Atlantic sharpnose, Blacknose and Blacktip



SPINNER



FEATURE

Young spinner



Anal fin may not be black tipped in young individuals less than 31 inches total length.

Key Characteristics

- a. Origin of 1st dorsal fin behind rear margin of pectoral fin*
- b. All fins black tipped*

Management Category

Large Coastal

Maximum Size 9 ft.

Common Size 2.5 to 6 ft.

Abundance

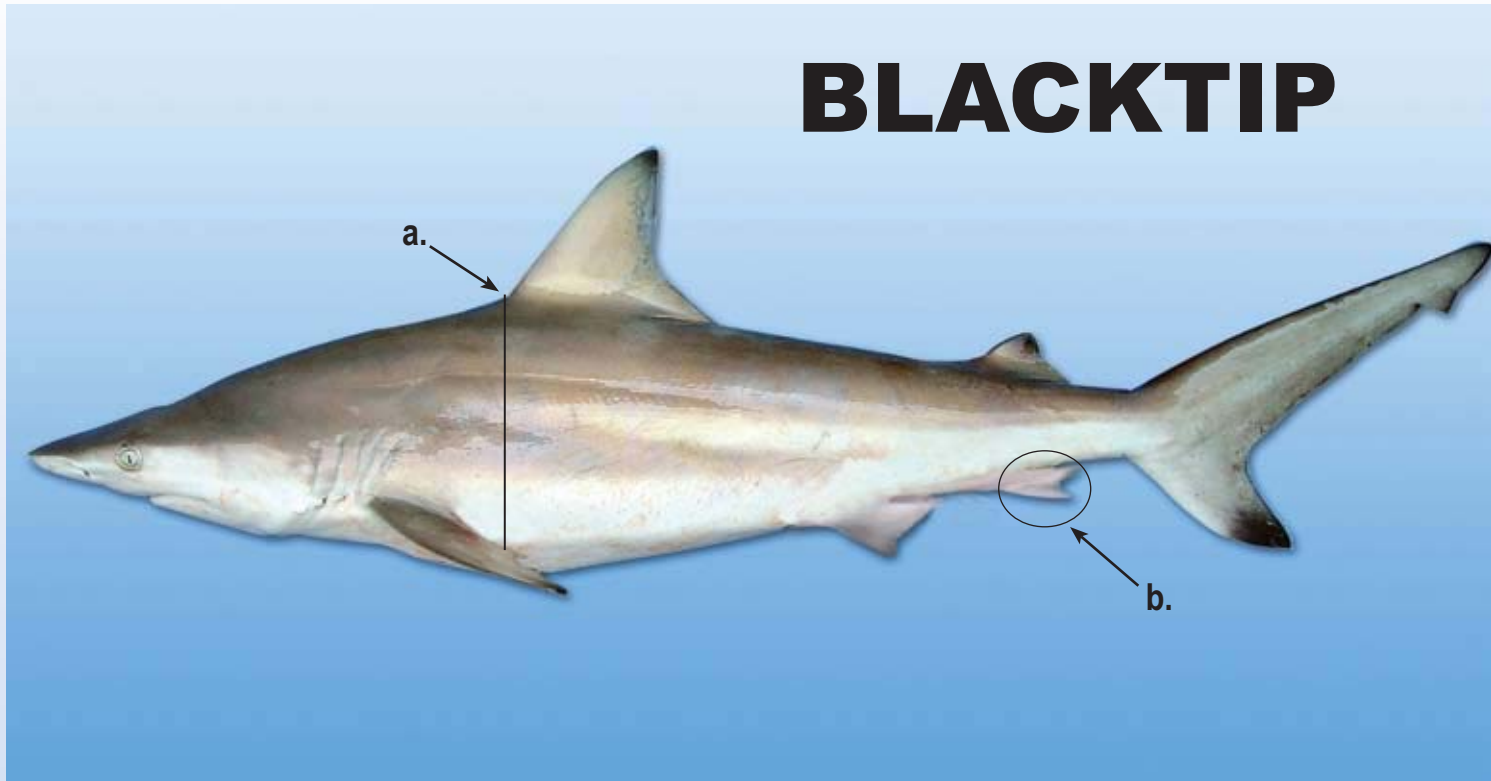
Inshore Medium / Offshore High

Similar Species

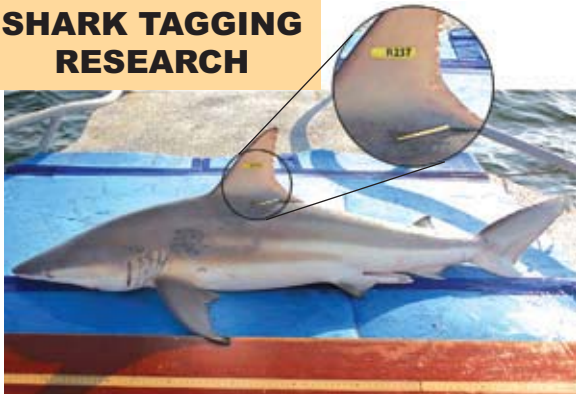
Blacktip



BLACKTIP



SHARK TAGGING RESEARCH



Researchers at GCRL are tagging sharks in Mississippi coastal waters to better understand their growth and movement patterns. Tags are located in the 1st dorsal fin region (see above photo). If a shark is encountered, please call the phone number on the tag and provide the tag number, species of shark, total length and location of capture. Any help that can be provided is appreciated.



Key Characteristics

- a. Origin of 1st dorsal fin over pectoral fin, sometimes over the rear margin
- b. All fins except anal fin black tipped

Management Category

Large Coastal

Maximum Size 9 ft.

Common Size 2 to 5 ft.

Abundance

Inshore High / Offshore High

Similar Species

Spinner, Bull and Finetooth

Photo Credits

R. Dean Grubbs - Mako Shark
Jack Randall - Dusky Shark
James Franks - Mako Closeup
Glenn Parsons - Nurse and Smalltail Sharks
Eric Hoffmayer - Remaining Shark Photos

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