IOCAIS

SoCal Beach Residents - These are species that can be encountered all year round off of Southern CA beaches.



50 yrds

Size: 0.2 to 5 ft Range: San Francisco, CA to southern Mexico, including Gulf of California Conservation **Status**: Near Threatened

100 yrds

• Horn Shark

Size: 0.15 to 4 ft Range: Pt Conception to Gulf of California Facts: Non-toxic

Diamond Ray Vidth: to 4 ft Range: Central CA to Galapagos Islands, and Gulf of California

• Leopard Shark

Size: 0.8 to 6 ft Range: In eastern Pacific from OR to Mazatlan, Mexico, including Gulf of California



• Swell Shark

Size: 0.15 to 3.3 ft **Range**: Monterey



Butterfly Ray Width: to 22 in. Range: Northern CA to Ecuador,

including Gulf of California



• Juvenile White Shark **Size**: 4 - 6 ft Range:

Circumglobal in tropical

• Bat Ray

Width: to 6/ft Range: In eastern Pacific from OR to Gulf of California

• Soupfin/Tope

Columbia to

Ecuador

Size: 1 to 6.4 ft

Range: N British

• Grey Smooth-hound

Round Stingray

Width: to 22 in.

CA to Ecuador,

California

including Gulf of

Range: Northern

Size: 0.8 to 4 ft Range: Northern CA to Mazatlan Mexico, including Gulf of California

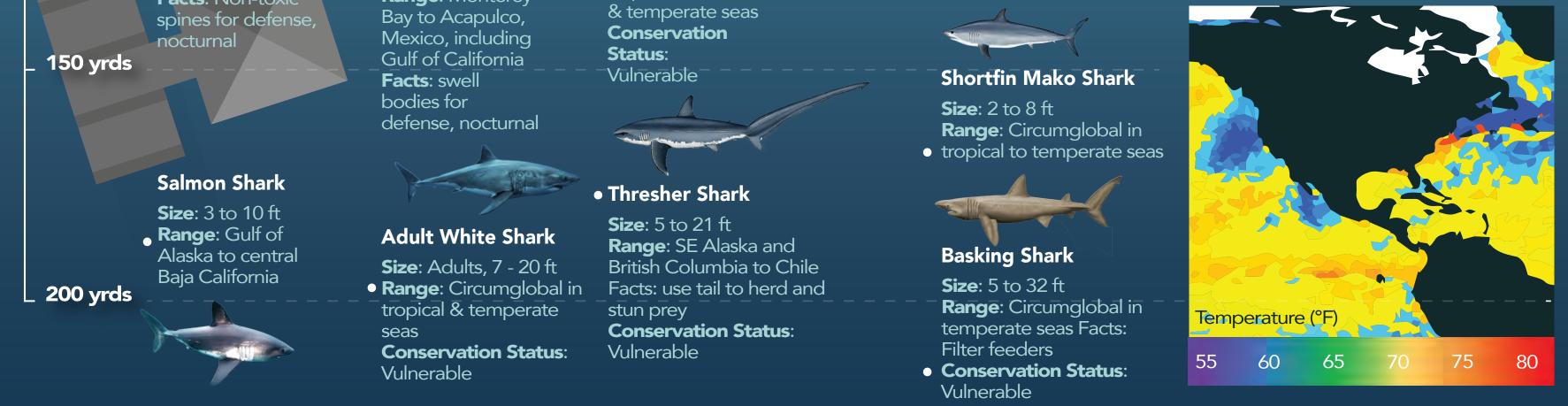
RELATIVE ABUNDANCE

Diamond Rays Butterfly Rays Swell Sharks Horn Sharks Adult White Sharks Basking Sharks Mako Sharks Salmon Sharks Soupfin/Tope Sharks Thresher Sharks Grey Smoothhounds Shovelnose Guitarfish Bat Rays Leopard Sharks

Offshore

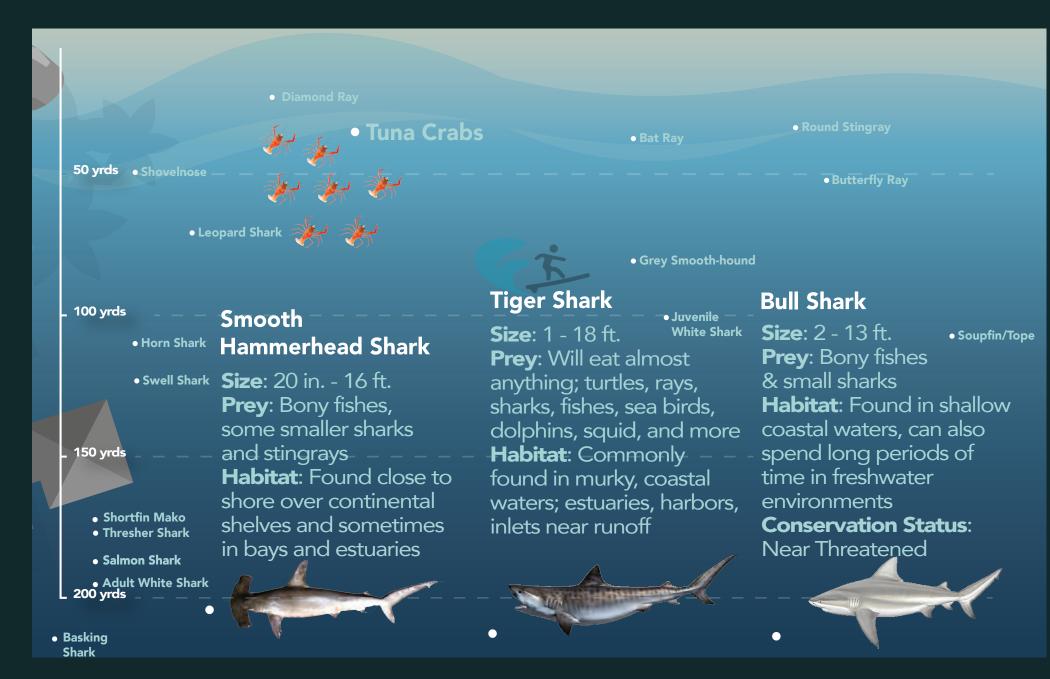
Beach & Piers

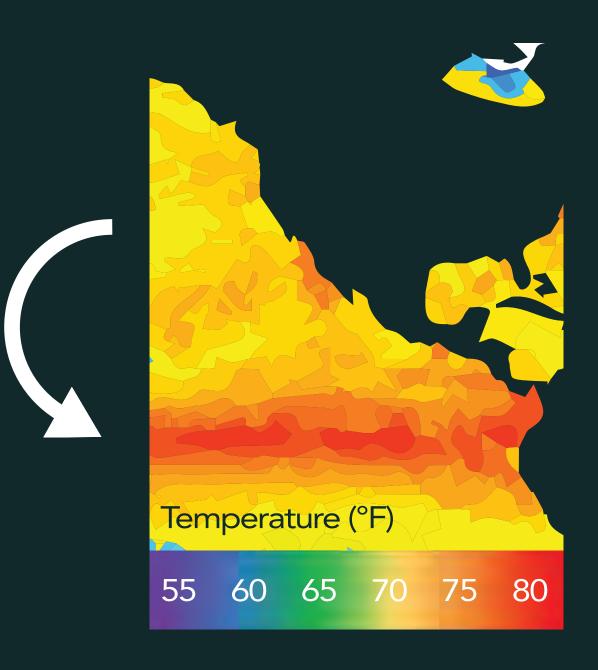
Round Stingrays



EL NINO VISITORS

El Niño Southern Oscillation is when the oceanic currents change bringing warmer water, less nutrients, and a shift in marine communities to Southern CA beaches. During these events, additional species may be encountered.





Water temperature during an El Niño. Warmer water pushes species further North up the So Cal coast.

EL NIÑO TIMELINE: FREQUENCY AND INTENSITY

1905 1910 1915 1920 1925 1930 1935 1940 1945 1950 1955 1960 1965 1970 1975 1980 1985 1990 1995 2000 2005 2010 2015 2020 1900

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