



species specifics



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**BIG-EYE
THRESHER
SHARK**
(*Alopias
superciliosus*)

Angler Jack Sepulveda - Photo courtesy of PIER

Worldwide, there are three species of thresher shark (Family *Alopiidae*), all of which possess an extremely long, whip-like tail. Although the common thresher (*Alopias vulpinus*), pelagic thresher (*A. pelagicus*), and big-eye thresher (*A. superciliosus*) sharks typically segregate

based on different environmental preferences (i.e., water temperature, depth), the waters off southern California are unique in that all three species can be caught off our productive coast during the same season.

In Southern California the most abundant species is by far the common thresher, a species that has bounced back from heavy exploitation during the 1980s and now supports a growing recreational fishery. The second most abundant thresher is the big-eye or brown thresher. Big-eye threshers are easily distinguishable from the common thresher by the presence of lateral grooves along the top of the head, which give the appearance of a helmet-like head with very large, upward-looking eyes. They also have a dorsal fin that is set

farther back on the body and a tail that is slightly shorter than that of the common thresher.

Ranging from tropical to temperate seas, big-eye threshers have a broad distribution, and they frequent Southern California waters in the summer and fall months. Typically, these sharks occur at great depths, well below the surface during the day, and therefore are rarely encountered by recreational fishers.

Fisheries

Although big-eye threshers are occasionally caught on hook and line (usually while fishing at night or deep-dropping during the day), the vast majority of those landed in California are caught in the drift gillnet fishery for swordfish.

Because its meat does not keep well and is not as firm as that of the common thresher, the big-eye thresher shark has a low market value; therefore, they are not targeted in California and are not usually retained for sale. Outside of California, big-eye threshers are caught on tuna and swordfish long-line gear, particularly deep-set operations targeting big-eye tuna. Again, most of the industrialized operations around the world do not retain big-eye thresher sharks because there are many other more lucrative species that can fill the valuable hold space. However, in many of the artisanal fisheries of Latin America, the big-eye thresher is a welcome catch that receives a similar price to other shark species.

Ecology

In southern California the big-eye thresher has a similar ecological niche to that of the swordfish. During the day, these sharks remain well beneath the thermocline, hunting prey at great depths, where temperatures are extreme-

ly cool and oxygen levels are low. Their enormous eyes are positioned on top of their head to enable the shark to focus on prey that is silhouetted by the down-welled light. Similar to many pelagic species, the big-eye thresher vertically migrates at night to feed in the productive surface waters. This feeding strategy allows them to inhabit very productive forage zones both during the day and night.

Although the feeding ecology of the big-eye thresher is not well studied, it is hypothesized that this species, just like the common thresher, uses its tail to subdue prey before it is consumed. Support for this comes from long-line data showing that they are often tail-hooked, as well as reports of big-eye threshers hooked in the tail while slow-trolling baited lures in Southern California.

Prey consists primarily of a wide variety of fish and squid that make up the deep scattering layer, including hake, lantern-fish, and some other pelagic species.

Reproduction

The big-eye thresher gives birth to only two, well-developed pups at a time. Pups are born at a large size (greater than four feet), and despite precise gestation data, it is believed that gestation is around one year. Similar to many pelagic sharks, males reach maturity at a slightly smaller size than the females, which mature at around 11 feet in total length.

Conservation Status

Fortunately for the big-eye thresher, there are no large-scale targeted fisheries for this species. Further, because they spend so much of their existence well beneath the surface waters, there is limited interaction with most of the commercial gear types used today. Nonetheless, this species is slow-growing, gives birth to only a couple of pups, and has long gestation periods, characteristics that make all pelagic sharks extremely vulnerable to overexploitation.

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