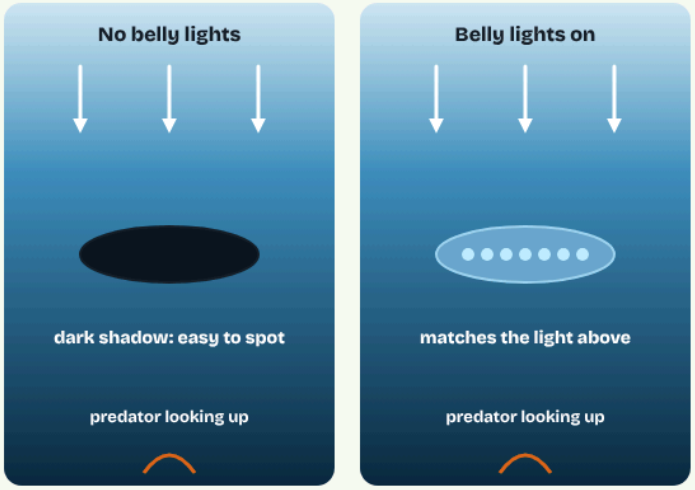
That is why

How does the hatchetfish stay hidden?

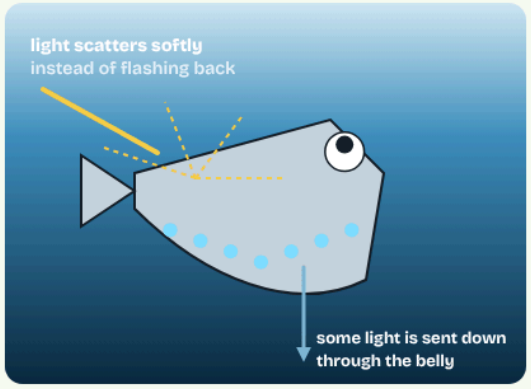
Belly lights erase its shadow from below, and silvery sides scatter light so it blends in from the side.

A Seen from below: hiding the shadow



Blue light-producing organs (photophores) point down from the belly. The fish matches their brightness to the faint light from above, so its silhouette disappears. This is called counterillumination.

B Seen from the side



Its thin, flat body and silvery skin look like the dull side of kitchen foil. Researchers found the skin scatters light rather than acting like a true mirror, which would flash a predator's light straight back.

A flat, "hatchet" shape

From the front or below, there is very little fish to see, and from the side its silver sides blend with the light around it.

C Key facts

1 Small

About 3 to 12 cm long, depending on the species.

2 Eyes point up

Big upward eyes spot the silhouettes of prey against the light above.

3 Daily commute

Some rise from as deep as 1,500 m at night to feed, then sink again at dawn.

Food: copepods, ostracods and other tiny drifting animals.

Erase the shadow, blur the shine, and a fish disappears.

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