That is why

Why are some deep-sea fish ultra-black?

Their skin soaks up over 99.5% of the light that hits it, so predators' searchlights bounce back almost nothing.

A Light reflected back

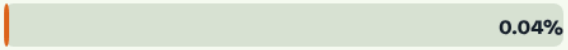
Black paper



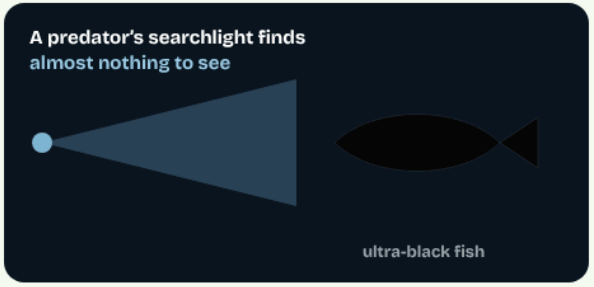
Ultra-black fish



Darkest anglerfish

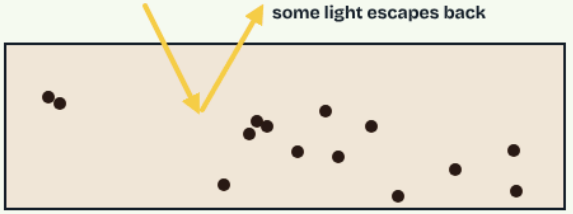


Bars: share of light bounced back (full bar = 10%).



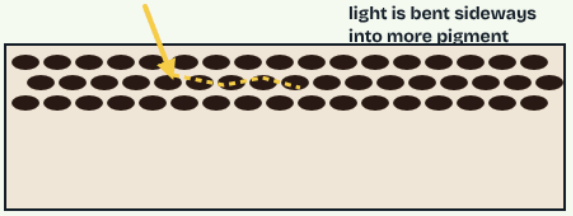
B Inside the skin

Ordinary black skin



Small, round pigment grains spread out, with gaps between them.

Ultra-black skin



Bigger, oblong grains packed into one continuous layer right at the surface.

C Why it matters

1 Below 1,000 m

No sunlight is left. The only light comes from animals, often as searchlights or flashes.

2 6 times closer

Ultra-black skin means a fish can only be spotted from six times closer.

3 At least 16 species

Including anglerfish and the Pacific blackdragon.

Only birds-of-paradise feathers are known to be as black.

In a world lit by searchlights, the safest skin reflects nothing.

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