## How are fish able to move in all directions?



As we know, fish are not restricted to moving forward and backward. A fish unable to move up and down will be unable to survive. This problem has been overcome with the air sacs created in fishes' bodies, thanks to which they can dive into the depths or rise up to the surface. When fish dive down to the bottom, the physical effects of the water on their bodies change. They adapt to changing conditions at various depths by reducing or increasing the gas in the air sacs.

In addition, fishes' centers of gravity are generally designed to pass through their air sacs, so if their balance is disrupted, they can regain their desired position by only small movements of their fins.

Most fish are covered in a highly resistant skin, consisting of an upper and a lower layer. The upper layer contains glands secreting mucus, whose slippery nature reduces friction to a minimum during movement in the water. It also makes it more difficult for predators to seize them, and protects the fish from disease-causing organisms.

Also, in the upper layer of fishes' skins is a keratin-like layer that ensures no outside water enters the body. Were it not for that layer, the entry of water would impair the internal pressure balance in the fish's body, and the fish would die. ("Hircin Erkekleri, Bariscil Disileri ile Kemikli Baliklar" (Aggressive Males, Peacable Females and Boned Fish), p. 75)

The designs and functions of the several systems that facilitate the fish's movement through the water are all different. Yet in the absence of one, the others would serve

no purpose, and any deficiency would mean death for the fish.

For instance, the mucus layer needs to have both specific levels of slipperiness and stickiness and also an anti-microbial property. It's of course a miracle that these conditions are achieved not in giant chemical factories, but in a layer just a few millimeters thick under the fish's skin. These features require the greatest wisdom, and are proofs that God has created fish. God reveals his omnipotence in a verse:

## ... everything in the heavens and Earth belongs to Him. Everything is obedient to Him, the Originator of the heavens and Earth. When He decides on something, He just says to it, 'Be!' and it is. (Surat al-Baqara: 116-117)

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