

CREATION MOMENTS

Proclaiming Evidence for Truth

THIS WEEK'S CREATION MOMENT

Oxygen-Optional Carp



Thou art the God that doest wonders: thou hast declared thy strength among the people. – Psalm 77:14

The long, cold winters of Scandinavia not only freeze the lakes, but pile so much snow on the lake ice that no light can penetrate to the cold, unfrozen

water beneath. This means that the creatures below the ice can use up all the oxygen in the lake water.

As a result of the lack of oxygen, lactic acid builds up in the bodies of these creatures as they metabolize sugar to get energy. However, turtles can stand levels of lactic acid in their systems that would kill you or me, and they lower their heartbeat to 10 percent of normal. The Crucian carp, similar to a goldfish, takes a unique approach to this lack of oxygen. As the oxygen disappears, the carp slows its heartbeat. The fish then changes its entire metabolic chemistry to a process that can get energy from sugar without oxygen. This oxygen-free metabolism turns the lactic acid into ethanol, which the fish releases through its gills. The members of this carp family are the only vertebrates that can continue normal life without oxygen.

That God's wonders seem without number and often seem impossible tells us of God's unlimited creativity and His ability to do anything. His plan of salvation in which His Son, Jesus Christ, carried our sin on the cross makes us thankful for His creativity and wisdom.

Ref: *Science News*, 10/2/04, p. 213, S. Milius, "Beat Goes On." See also: <http://www.crucians.org/>. Photo: Crucian carp. Courtesy of Viridiflavus. (CC-BY-SA 3.0)

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