

# CREATION MOMENTS

*Proclaiming Evidence for Truth*

## THIS WEEK'S CREATION MOMENT

### The Best Swimming Wing



*And God created great whales, and every living creature that moveth, which the waters brought forth abundantly, after their kind...—Genesis 1:21a*

An unusual example of a design in nature that runs counter to human common sense is found in the pectoral flippers of the humpback whale. The leading edge of these flippers, which one would intuitively expect to be smooth, actually sport evenly spaced bumps.

After all, airplanes, as well as birds, have sleek leading edges on their wings. These smooth edges would seem to be the most efficient at cutting through the air, which is a fluid, just like water. Puzzled about this, scientists made two models of the humpback's pectoral fins. One had a smooth edge, the other had the bumps that appear on real fins. These models were taken for testing in a wind tunnel. Not surprisingly, the smooth-edged fins performed like a standard wing. However, the humpback model did much better! It generated 8 percent more lift and a third less drag than the standard design. What's more, the bumpy wing could angle 40 percent more steeply into the air than the sleek model before it stalled. Since water, like air, is a fluid, these principles would apply to a real humpback fin, enabling humpbacks to be more nimble in the water.

This unusual design comes in handy for the humpback because they feed on fast-moving schools of nimble herring and sardines. Obviously, God gave them a special design to help them do this.

**Prayer:** Father, I thank You that Your thoughts are not our thoughts. Help me to think more like You. Amen.

**Ref:** *Scientific American*, 8-2004, pp. 18-19, "Bumpy Flying."

© 2013, Creation Moments. Churches and parents may freely copy these bulletin inserts.

CREATION MOMENTS, INC.

P. O. Box 839 • Foley, MN 56329 • 800-422-4253

To receive our free Today's Creation Moment e-mail, visit [www.creationmoments.com](http://www.creationmoments.com).

# CREATION MOMENTS

*Proclaiming Evidence for Truth*

## THIS WEEK'S CREATION MOMENT

### The Best Swimming Wing



*And God created great whales, and every living creature that moveth, which the waters brought forth abundantly, after their kind...—Genesis 1:21a*

An unusual example of a design in nature that runs counter to human common sense is found in the pectoral flippers of the humpback whale. The leading edge of these flippers, which one would intuitively expect to be smooth, actually sport evenly spaced bumps.

After all, airplanes, as well as birds, have sleek leading edges on their wings. These smooth edges would seem to be the most efficient at cutting through the air, which is a fluid, just like water. Puzzled about this, scientists made two models of the humpback's pectoral fins. One had a smooth edge, the other had the bumps that appear on real fins. These models were taken for testing in a wind tunnel. Not surprisingly, the smooth-edged fins performed like a standard wing. However, the humpback model did much better! It generated 8 percent more lift and a third less drag than the standard design. What's more, the bumpy wing could angle 40 percent more steeply into the air than the sleek model before it stalled. Since water, like air, is a fluid, these principles would apply to a real humpback fin, enabling humpbacks to be more nimble in the water.

This unusual design comes in handy for the humpback because they feed on fast-moving schools of nimble herring and sardines. Obviously, God gave them a special design to help them do this.

**Prayer:** Father, I thank You that Your thoughts are not our thoughts. Help me to think more like You. Amen.

**Ref:** *Scientific American*, 8-2004, pp. 18-19, "Bumpy Flying."

© 2013, Creation Moments. Churches and parents may freely copy these bulletin inserts.

CREATION MOMENTS, INC.

P. O. Box 839 • Foley, MN 56329 • 800-422-4253

To receive our free Today's Creation Moment e-mail, visit [www.creationmoments.com](http://www.creationmoments.com).