

# CREATION MOMENTS

*Proclaiming Evidence for Truth*

## THIS WEEK'S CREATION MOMENT

### A Real Bat Computer



*Restore unto me the joy of thy salvation; and uphold me with thy free spirit. – Psalm 51:12*

Nearly everyone is familiar with the way in which the whistle of a train moving toward them lowers in pitch as the train passes. The change in pitch is caused by the change in the movement of the train relative to the listener. First it is moving toward the listener, but after it passes it is moving away. This change in pitch is called Doppler shifting. Now let's apply this principle to the bat's echolocation system.

Bats are most sensitive to certain frequencies as they listen for the echo of their high pitched squeak. If you are a bat, you listen for echoes from stationary objects around you, like trees, as well as moving objects, such as an insect that is about to become lunch. Because of the differences in the movements of these objects relative to your flight, Doppler shifting changes the pitch of returning echoes. That change could place a returning echo outside the range of frequencies to which you are most sensitive.

Scientists have discovered that the bat solves this problem by calculating the expected change in frequency due to Doppler shifting and then altering his squeak so that the returning echo is at the needed frequency! How many of us could do that without a computer and other sophisticated equipment?

Amazingly, the Creator has gone so far as to make the bat a bit of a physicist so it can make its living. What an elegant testimony to God's wisdom and generosity!

Ref: "Bats alter frequency of squeaks to aid hunt for prey." *The San Diego Union*, Mon., 10/23/89. p. D-1. <http://science.howstuffworks.com/environmental/life/zoology/mammals/bat2.htm>.

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