



Echolocation is the ability of an animal, such as a bat, to locate its prey by means of sound. The bat emits a series of extremely high pitched "beeps" and then analyzes the echos that these beeps produce as the echoes of the beeps bounce back off of objects. The concept of echolocation was first utilized by man in World War II when sonar was used to detect the presence of submarines beneath the surface of the sea.

Until recently, echolocation in bats did not appear to be significant in the evolution/creation controversy. But that has now changed because of several significant discoveries.

It was previously believed that bats utilized both vision and echolocation to locate their prey, but that has been proven not to be the case for at least one species of bat. That bat can locate its prey in total darkness. *Perception of Silent and Motionless Prey on Vegetation in the Gleaning bat Microycteris Microtis*, by Inga Geipel and Kirsten Jung of the University of Ulm, Germany; and Elisabeth K. V. Kalko, of the University of Ulm and the Smithsonian Tropical Research Institute, Panama; Proceedings of the Royal Society B: Biological Sciences.

"Using echolocation alone the bats found, identified and captured insects perched motionless and silent on the leaves of plants. Remarkably, the scientists concluded that through echolocation alone these foraging bats are able to perceive a detailed image of an insect's shape and structure." Quoted from <http://smithsonianscience.org/2013/01/common-tropical-bat-uses-echolocation-with-precision-previously-considered-impossible-new-experiments-reveal/>

A bat can locate a motionless insect on the leaf of a plant in total darkness. That means that by the use of sound echoes alone, it can distinguish an insect on a leaf from the leaf from the surrounding twigs and leaves and branches. How can it do this? It is hard to imagine what an echo off a bug on a leaf would sound like. How vastly sensitive the bat's hearing must be to be able to even hear it. And then to be able to distinguish the presence of anything on the surface of the leaf from echoes alone is quite beyond understanding.

Between its large ears the bat has a living computer that is hard-wired with a vastly complex mathematical algorithm that can analyze these barely perceptible echoes that come from leaves and insects, each one with a slightly different nuance. There is one echo from one position and then a slightly different echo from another position and somehow when the echoes are compared, the differences between the two echoes (or series of echoes) disclose the presence of something on the surface of the leaf.

But what is it on the surface of the leaf? Is it an insect? The echolocation study shows that not only can the bat tell an insect from something else, he can also tell, in the case of a dragonfly, where to bite it.

And that is not all. The mathematics that have been programmed into the bat's "computer" brain are so astoundingly accurate that they enable the bat not only to locate the insect, but to analyze the surface texture of the wing of the dragonfly.

When referring to the wings of dragonflies, the authors of this study state the following:

"... we infer that differences in reflective properties of surface textures are recognized by *M. microtis* and used for prey classification. The importance of texture information for bats has been already demonstrated for the Indian false vampire bat, *Megaderma lyra* (Megadermatidae)." See Geipel and Jung, supra.

Where did this astounding - and instantaneous - analysis come from? Where did the mathematical algorithm come from? Who figured it out? How was it written into the neurons of the bat's brain and timed down the nano-second to create an awareness of such flawless accuracy? What immense subtleties, what incredibly minute differences there are between a sound echo off the wing of a dragon fly from one position and another echo from a position perhaps an inch to the side? How is this possible?

Evolution has a very simple answer: all of the bats who did not have this inconceivably sensitive hearing and complex mathematics programmed into their brain died. And that is the reason why the bats that are alive today can take the minute and subtle differences between the hundreds of echos and perceive the very texture of a dragonfly's wing by sound. It's so easy to understand. You see, bats did not start out that way. They started out as a group of cells that could neither hear nor see. Then through a series of amazing mutations, they developed eyes and ears. Then they just got better and better until, well, they got to where they could perceive the surface irregularity of a dragonfly's wing by analyzing the differences in sound that echoed off of the surface. It was environmental pressure. Yes, that's it, and all of those bats that could not see with sound died.

Perhaps anyone can see that this is really no explanation at all. The bat was not created by a series of amazing mutations and "environmental pressure." The bat was created by the same entity that created the reader and that entity is God, the Creator of all life. There is no other reasonable explanation.

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