

The Warm-Blooded Bumblebee

What is warm-blooded, sits on its eggs like a hen, but flies much better than a hen, and has six legs? It's the bumblebee.

The amazing fact that bumblebees are warm-blooded was discovered after a scientist saw a bumblebee gathering nectar one frosty morning. As it turned out, even with air temperatures near freezing, a bumblebee can maintain a body temperature of 95° F. In order for the bee's tiny body to stay warm, it has a power output that is 20 to 30 times that of a world-class marathon runner!

Bumblebees are made up of three body sections; the head, the thorax, and the abdomen. They heat their blood in the thorax, where the flight muscles are located and where the heat is most needed. This heat is regulated by the bee's circulatory system, which flows through its narrow "waist." Blood passing through this "waist" from the cooler abdomen can be heated by the sun if necessary. It then passes through a heat exchanger in which it is further heated by the warmer blood flowing away from the muscles. On a hot day, the bee does the neatest trick of all. It actually changes its circulatory system, so that fresh blood coming to the wing muscles is not heated at all by the heat exchange system. The queen bumblebee also uses this ability to control heat to incubate her eggs at 80 degrees, like a mother hen.

There is no simple form of life. What sets humans apart from other life has nothing to do with warm blood, their brains, or evolution. Humans, created in God's image, find redemption only in Jesus Christ.

Genesis 1:27

"So God created man in his own image, in the image of God created he him; male and female created he them."

Prayer: Dear Father in heaven; I thank You that You do not evaluate me for what I am—a sinner. Since I have forgiveness of sins through Your Son Jesus Christ, I trust Your promise that when You look at me You see His sinless life. In His Name. Amen

REF.: Jordan, William. The bee complex, *Science* 84.