

Bee Flight Physics and the Creator

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In 1934, using mathematical calculations, French entomologist August Magnan concluded that bee flight was aerodynamically impossible. The haphazard flapping of their wings simply should not enable bees to fly. The mystery that has perplexed scientists ever since (due to inadequate understanding of aerodynamic theory) is now believed to have been clarified. Using high-speed digital cameras and a giant robotic model of a bee wing, bioengineers at the California Institute of Technology and the University of Nevada at Las Vegas have been studying honeybee flight in an effort to determine how bees fly (Altshuler, et al., 2005). They discovered that bees operate with the same basic aerodynamic principles that facilitate flight capability in other flying creatures, including velocity, wing stroke amplitude, stroke reversals, wingbeat frequency, and wing length. They simply utilize these principles in different proportions and combinations.

Why? Why would bees operate on altered aerodynamic principles? The scientists do not know. They speculate that since bees consume floral nectar, they possess “excess power available for ecologically useful but aerodynamically expensive behaviors” (102[50]:18218). Observe that “ecologically useful” implies that bee flight is specifically suited to bee activity—which is another way to say that a bee is strategically and deliberately **designed** to fulfill its function efficiently. The scientists compare honeybees to hummingbirds “that are able to forage for high-energy nectar rewards by using **more energetically demanding flight**” (102[50]:18218, emp. added). In other words, the use of adjusted aerodynamic principles is not due to alleged inherited evolutionary inefficiency; rather, it is the result of deliberate design calculated to achieve different objectives and accommodate different purposes. Hummingbirds do not fly like sparrows—because they are not sparrows! And bees do not fly like mosquitoes—because they are not mosquitoes! Each flying creature’s flight capabilities are specifically suited to accommodate its created purpose and function.

Do bees have any specific needs in order to accomplish their peculiar functions? Yes, and the scientists, themselves, offer the following: “Honeybees and other hymenopterans [the order of insects that includes bees, wasps, and ants—DM] need to carry much heavier loads that may actually exceed body mass in numerous contexts, including undertaking, prey transport, and foraging for nectar or

pollen” (102[50]:18218). Again, in other words, bee flight is **specifically designed** to accommodate the tasks that bees perform. But design demands a designer! Design requires an intelligence that exceeds the blind, mechanistic forces of nature.

Here is the conclusion set forth by the researchers:

In conclusion, our analysis of honeybee aerodynamics reveals how the rapid low-amplitude wing motion of bees is sufficient to maintain the weight of the animal. [We knew that—DM.] Furthermore, honeybees exhibit considerable ability to generate **excess aerodynamic power**, which they accomplish by raising stroke amplitude while maintaining constant frequency. This ability may be related to **requirements of social insects** to carry loads related to foraging, undertaking, and brood transport (102[50]:18218, emp. added).

Notice: the bee deliberately generates extra aerodynamic power. Why? The scientists speculate that it is due to the bee’s need to carry out its social duties—the requirements it possesses due to its place in the insect social order. My friend, such a circumstance has intelligent design written all over it. Such complexity, such design, such planning, and such purpose could not have happened without a Mind. That Mind is none other than the God of the Bible:

Lift up your eyes on high, and see who has created these things, Who brings out their host by number; He calls them all by name, by the greatness of His might and the strength of His power.... For thus says the Lord, Who created the heavens, Who is God, Who formed the earth and made it, Who has established it, Who did not create it in vain, Who formed it to be inhabited: “I am the Lord, and there is no other” (Isaiah 40:26; 45:18).

You are worthy, O Lord, to receive glory and honor and power; for You created all things, and by Your will they exist and were created (Revelation 4:11).

REFERENCE

Altshuler, Douglas L., William B. Dickson, Jason T. Vance, Stephen P. Roberts, and Michael H. Dickinson (2005), “Short-Amplitude High-Frequency Wing Strokes Determine the Aerodynamics of Honeybee Flight,” *Proceedings of the National Academy of Sciences*, 102[50]:18213-18218, December 13.



Q Did Methuselah die during the global Flood?

A In Genesis chapter 5, Moses recorded the genealogy of Adam. The name that commonly stands out in that list is Methuselah. Methuselah is the oldest person recorded in Scripture, and his name is often used today when referring to something or someone very old. In verse 21 of that chapter, we learn that Methuselah was the son of Enoch. We are then informed:

Methuselah lived one hundred and eighty-seven years, and begot Lamech. After he begot Lamech, Methuselah lived seven hundred and eighty-two years, and had sons and daughters. So all the days of Methuselah were nine hundred and sixty-nine years; and he died. Lamech lived one hundred and eighty-two years and had a son (vss. 25-28).

Lamech's son was Noah. The Bible records in Genesis 7:6 that Noah was 600 years old when the floodwaters were on the Earth. In light of this information, we can take the age of Methuselah when Lamech was born (187), add to that Lamech's age when he begot Noah (182) and the age of Noah when the floodwaters came (600), and determine that Me-

thuselah was 969 years old the year the Flood occurred [$187+182+600=969$]. Since Genesis 5:27 indicates this was the age at which Methuselah died, it is logical to conclude that he died the year of the Flood. However, the Bible does not indicate that he died as a **result** of the Flood. [Remember, his father was Enoch, one of a select few who walked with God and was taken directly by God, not experiencing death. Thus, Methuselah's father was a very righteous man, who undoubtedly set a proper example for his son.] While the exact meaning of Methuselah's name is unknown, many scholars have suggested that it means: "When he dies, it shall be sent," implying that the Flood would result when Methuselah died (Morris, 1976, p. 160). But, here again, we cannot be certain and should not be dogmatic.

Brad Harrub

REFERENCE

Morris, Henry (1976), *The Genesis Record* (Grand Rapids, MI: Baker).

IN THE NEWS

As the creation-evolution debate rages in courtrooms throughout America, and while lawsuits are being filed continually in objection to various visible vestiges of America's Christian heritage, one court case in Viterbo, Italy is drawing worldwide attention. Atheist Luigi Cascioli is suing Catholic priest Enrico Righi for teaching that Jesus lived on Earth 2,000 years ago. Cascioli contends that Righi and the Catholic church have deceived many people by teaching that Jesus was a real historical person who actually lived in Palestine during the first century. After Judge Mautone initially refused to hear the case, his decision was overruled in December 2005 by the Court of Appeal, "which agreed that Signor Cascioli had a reasonable case for his accusation that Father Righi was 'abusing popular credulity' by teaching the historicity of Jesus (Owen, 2006). Righi has now been ordered to appear in court "to prove that Jesus Christ existed" (Owen).

A mountain of evidence exists for the reality of Christ (none more important than the historical, inspired New Testament documents), and yet skeptics continue to allege that he is merely a figment of our imagination, and/or has been confused with one of several "known" historical persons from the first century. If skeptics and atheists are now going to take "Jesus" to court (which should not concern Christians in view of the evi-

dence supporting His historicity), perhaps those same individuals will be consistent and put their beloved theory of evolution on trial. After all, evolutionary science professors worldwide teach students the "fact" that the Universe is the product of a Big Bang, yet no one has ever proven such to be the case. (In reality, a growing number of scientists are beginning to reject this explanation for the origin of the Universe—see Harrub, 2005). What's more, students are repeatedly taught that life came from non-living chemicals billions of years ago, even though no one has ever witnessed spontaneous generation take place, and the law of biogenesis flatly contradicts this theory.

The fact that Cascioli's case has reached this far is a sad commentary on today's society. The fact that the unproven theory of evolution continues to get a free pass among "enlightened" skeptics who (allegedly) want only "the facts," is also telling.

Eric Lyons

REFERENCES

Harrub, Brad (2005), "Big Bang Breakdown," [Online], URL: <http://www.apologeticspress.org/articles/309>.
Owen, Richard (2006), "Prove Christ Exists, Judge Orders Priest," *The Times Online*, January 3, [Online], URL: <http://www.timesonline.co.uk/article/0,,13509-1967413,00.html>.