

Identifying the origin of the fly

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The Blowfly: Flies originated in wet environments and as they evolved they adapted to feed in almost any nutrient-rich substrate, becoming adapted to almost any environment on earth. (David McClenaghan, CSIRO)

(PhysOrg.com) -- Some may think that the mosquito and the house fly are worlds apart when it comes to common ancestry but new research published this week by an international team of scientists puts them much closer together in evolutionary history.

According to a paper published in the [Proceedings of the National Academy of Sciences](#) of the USA, the mosquito branched off the same evolutionary tree as the house fly around 220 million years ago.

Though just a few species of flies gain public attention as pests – namely: house flies, March flies and [mosquitoes](#) – there are 152,000 named species of flies, representing around 10 per cent of all species on Earth.

The March fly branched off some 175 million years ago, while the common house fly branched off about 50 million years ago.

Flies originated in wet environments and as they evolved they adapted to feed in almost any nutrient-rich substrate in almost any environment on earth.

“What this research shows us is that the Fly Tree of Life went through three periods of fast diversification, with many different groups experimenting with ways to be a fly,” says one of the paper’s co-authors, Dr David Yeates from CSIRO Ecosystem Sciences.

“The mosquito, March fly and common house fly are everyday members of these bursts of evolution, which occurred during unstable periods of Earth’s history when dramatic environmental change created new habitats for these ‘experimental’ flies.

“The really interesting thing is that living representatives of these early branching groups, such as mosquitoes and March flies, are still with us.

“This research provides an evolutionary framework for future comparative work on species that are critically important to both society and science,” Dr Yeates said.

The research was conducted by an international consortium of 27 scientists from six countries.

Provided by CSIRO

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