Snap of fruit fly embryo wins scientific photo competition

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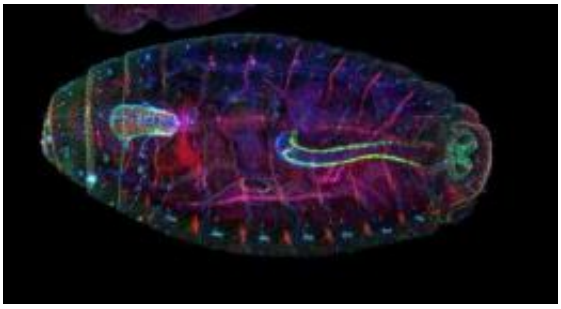

Samantha Warrington's winning image of the *Drosophila melanogaster* (fruit fly) embryo won the winning prize in the 'close-up category' at the Society of Biology's Photographic Competition. Credit: Samantha Warrington

An eye-catching image of a fruit fly embryo, which was taken by a postgraduate student at the University of Sheffield, has beaten-off stiff competition from hundreds of entries to win an award at a special photographic competition dedicated to biodiversity.

Samantha Warrington, a postgraduate student from the University's Department of Biomedical Science, scooped the winning prize in the 'close-up category' at the Society of Biology's Photographic Competition.

Her image captured the Drosophila melanogaster (fruit fly) embryo when it was approximately 20 hours old and shows the anterior (head

end) to the left and three cell membrane proteins which are fluorescently labelled in blue, green and red. The image was taken during Samantha's research on a confocal light microscope, which allows fly embryos - which are the size of the eye of a needle - to be magnified and explored in greater detail.

As the photo is a cross-section through the embryo, the outer layer (the epidermis) can be seen in green. At the back end of the embryo are two large round holes (the spiracles), which are required for breathing. The blue branched structure running along the top edge of the embryo is part of the tracheal system, a network of tubes that carry air from the spiracles to internal tissues. Other structures visible inside the embryo are parts of the gut and nervous system, including the hindgut, which is a distinctive shepherd's crook shape in green.

The competition was organised to mark and celebrate the UN designating 2010 the 'International Year of Biodiversity.' Entrants were free to submit entries they believed celebrated, explored, commented on or revealed aspects of biodiversity from around the world.

Categories in the competition included land, air, water and close-ups, which focused on biodiversity unseen by the naked eye.

Samantha, who often documents her research with photographs and enjoys taking pictures of landscapes and close-ups of flora and fauna, will now receive her prize of £250 in cash and vouchers from Park Cameras at an awards ceremony on 3 November 2010 at Charles Darwin House, London.

Samantha Warrington, a postgraduate student from the University of Sheffield's Biomedical Science, said: "I chose this photograph to submit because it shows the outer surface of the fly while still giving the impression of looking deeper within the embryo at the fly's internal

structures, which made it look more interesting. I'm thrilled the image has won the close-up category and am really pleased to see scientific images celebrated in this way."

Andrea Melendez, Assistant Editor from the Society of Biology, said: "The Society of Biology's International Year of Biodiversity Photographic Competition aimed to celebrate the biodiversity in the world around us. It was felt that Samantha's image really captured how intricate the developing fly embryo is and highlights just how much diversity is missed if we only concern ourselves with what is visible with the naked eye."

Catherine Draycott, the Head of Wellcome Images and a judge of the competition, said: "This image is not only very striking but even beautiful. It really shows how scientific techniques lead to knowledge and understanding that can be accessible to all of us. The fluorescent colours of confocal microscopy clearly pick out the parts and functions of this tiny organism with fascinating clarity."

Provided by University of Sheffield