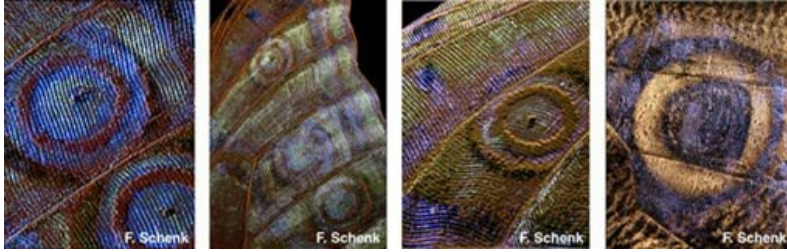


In the eye of the beholder: the art of evolution

The artwork



In response to Darwin's iconic description of the development of the eye, the visual artist Franziska Schenk will draw on novel biomimetic techniques and paint technology to create artworks inspired by the eyespots on iridescent butterfly wings. Mirroring the process of evolution, latest colour-shifting nanoparticles and innovative reproduction techniques will be employed to create successively 'modified' variations of the 'same' eyespot painting. In tandem, the complex interrelationship between the evolution of colour, camouflage, display and perception are artistically explored. The resulting series of interrelated paintings will form the centrepiece of exhibitions and public engagement activities in the Year of Darwin and beyond.

Biomimetics



(<http://www.birmingham.ac.uk/Images/College-LES-only/biosciences/franziska/LargeImages/butterfly-wing-detail.jpg>) Having worked on adapting the technology from its inception, Ms Schenk will draw on and extend her expertise in utilising cutting-edge iridescent nanoparticles, currently restricted to industrial usage. Analogous iridescence-inducing structures have existed in butterflies for thousands of years. The insects can therefore teach us how to best employ the challenging new medium. With the aid of biomimetics, the aim is to develop closely related, yet slightly differing multiples of an original painting that, like iridescent butterflies, fluctuate in perceived colour.

The new body of work will mark a further step in the artist's quest to introduce flow, movement, transience and an evolutionary element into painting - traditionally a stationary medium.

Evolution

(<http://www.birmingham.ac.uk/Images/College-LES-only/biosciences/franziska/LargeImages/eyespotpage2.jpg>)

The project's immediacy to biology is evident in both animal coloration/display and in the evolutionary development of the eye. Colour adaptation, eye development and perception are inextricably linked. Butterfly eyespots benefit the insect by tricking the eye of (and so warding off) predators. Since Darwin first described a sequence of eye development, molecular genetics has shed much light on the actual genes and biochemical pathways involved. Extensive work on the development of eyespots is currently being undertaken in the emerging field of evolutionary developmental biology (Evo-Devo). Crucially, given its profound implications well beyond biology, evolutionary theory offers a bridge between art and science – one the artist is exploring .

This project is part of the **Wellcome Trust's The Art of Darwin Initiative** (<http://www.wellcome.ac.uk/Achievements-and-Impact/Initiatives/Public-engagement/Darwin-200/The-art-of-Darwin/index.htm>)

Selected work was shown as part of **Evolution of Evolution** ([/schools/biosciences/research/artists-in-residence/beholder/Evolution-of-Evolution.doc](http://schools/biosciences/research/artists-in-residence/beholder/Evolution-of-Evolution.doc)) – a themed exhibition at Glasgow Science Centre (June 09).

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