Rose-Lynn Fisher's pictures provide a fascinating insight into the world of bees. Susan Burnstine reports

America is abuzz about Rose-Lynn Fisher's superb book, *Bee*.

Fisher's remarkable imagery provides an unforgettable entomological journey that offers a fascinating examination of the inner lives of bees. At times the pictures are reminiscent of Alice's voyage through the looking glass.

What is most notable is that Fisher has taken macro photography to an entirely new artistic level, while maintaining a childlike sense of wonder in every image.

Fisher has been practicing photography for more than 20 years and admits that it first served more as a resource than a medium. 'I used photography as reference, for exploring light, pattern and perspective in support of my painting and mixed media. Then one day I had some surprising results on a roll of Tri-X film and I wasn't sure if it was a fluke or an initiation – so I had to find out.'

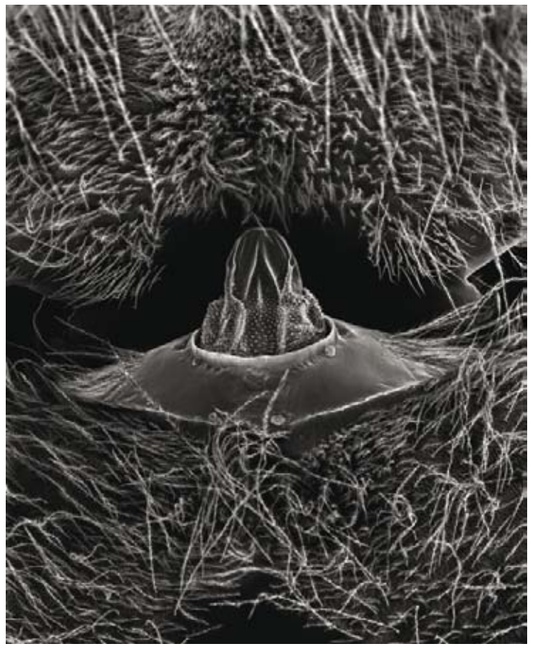
Fisher has great respect for the honeybee and views it as the 'ultimate pollinator, alchemist, architect, spatial genius, and winged apothecary, whose industries all benefit life.'

She continues, 'Looking at the bee in high magnifications gives evidence of the unending complexity of nature all around us – worlds within worlds.'

Fisher had access to a scanning electron microscope (SEM) through a close friend who works at a laboratory. When she first viewed a bee's compound eye through the SEM, she was hooked.

She said, 'I was amazed to see the field of hexagons that comprise the thousands of lenses of the compound eye, so similar in shape to the hexagonal structures that she builds in honeycomb. Beyond the scientific explanation that hexagons are simply nature's most efficient way of packing circles, this correspondence had metaphoric, symbolic meaning for me, hinting at a relationship of congruency between vision and action at a deep, intrinsic level of structuring, like the encoding of the golden mean or fractals. This is how it began for me.'

Fisher continues, 'The metaphor led me to the science, sparking my curiosity to explore the anatomy and morphology of the bee with the SEM, and then to learn more about pollination, environmental challenges and research. This project gradually evolved over 17 years and culminated with the book being published by Princeton Architectural Press. With the book and exhibitions of *Bee*, it's been exciting to engage with people I never would have met otherwise – from science, natural history and beekeeping, as well as those within my own familiar art community.'



Fisher's photographic process with the SEM began when her friend taught her the basics of electron microscopy technique, sample preparation and how to operate the microscope, a JEOL 6100 model. This SEM originally had an output of Polaroid film, but was later modified to digital output.

A scanning electron microscope uses a finely focused electron beam that scans across the surface of a prepared sample and converts electrical signals into a viewable image on a monitor.

Fisher explains, 'It would be like shining a flashlight across the surface of a stationary object in a dark room, except that an SEM uses a beam of electrons, not light.'

Fisher found all her bee subjects deceased outdoors and examined them to determine which were the best subjects.

She said, 'The bee was then coated with an atoms-thin layer of gold, which provides electrical conductivity for the scanning electron beam and enhances image quality. Then the bee was mounted on to a microscopic stage inside a vacuum chamber of the SEM. There are controls for rotation and tilt, as well as for adjusting magnification, brightness, contrast and focus. To make a photograph, the SEM performs another scan, this time very slowly, converting the electrical signals, point by point, line by line, into a digital image that can be saved. Post processing of the Tiff files is done in Photoshop.'

Last winter, I attended an exhibition of *Bee* at the Craig Krull Gallery in Santa Monica and was impressed by the remarkable tonality and rich blacks that were unlike any digital prints I'd seen before. Fisher obtained these results after trying out a variety of papers, printers and inks, both dye and pigment. After extensive research, she opted to print her images in black-only dye. She achieved the tonal range she desired using a Spyder3Print SR to measure ink densities, and then applying these measurements to Quad Tone Rip software to create her own curve.

Fisher is currently working on new fine art photo microscopy imagery and has several exhibitions planned in 2011, including Cross Mackenzie Gallery in Washington DC in the autumn.

rose-lynnfisher.com

EXHIBITIONS USA

KANSAS CITY
Nelson-Atkins Museum of Art
The Photographs of Ray K. Metzker
Until June 5
nelson-atkins.org

LOS ANGELES
J. Paul Getty Museum
In Focus: The Tree
Featuring work by Robert Adams, Eugene Atget, Myoung Ho Lee, Eliot Porter, Alfred Stieglitz, William Henry Fox Talbot and more
Until July 3
getty.edu

NEW YORK CITY
Pace/Macgill Gallery
Henry Wessel: Vintage Work
Until June 11
pacemacgill.com

SANTA FE
Verve Gallery of Photography
Stanko Abadzic, Manuel Carrillo, Jacko Vassilev
Until June 18
blueskygallery.org

SAN FRANCISCO
Gallery 291
Elisabeth Sunday: New Works From Africa
Until July 4
gallery291.net

SANTA MONICA
DNJ Gallery
Michael Eastman: Plexigraphs
Until May 28
dnjgallery.net

WOODSTOCK
Galerie BMG
Jessica Kaufman, Panopticon
Until May 23
galeriebmg.com