

Pollen research not be sniffed at

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Pollen may annoy allergy sufferers in springtime but, viewed under the microscope, a pollen grain is a thing of beauty. Amazing images and facts about pollen are part of an exhibition at CSIRO Discovery in Canberra beginning this week to coincide with Floriade.

The exhibition 'Pollen Under the Microscope' celebrates the purchase of cutting-edge microscope technology to identify [pollen](#) grains and speed up our understanding of nature.

It showcases some of the most beautiful images available of pollens from Australia and overseas including some from ANU, Massey University, CSIRO, photo libraries and amateur photographers.

Some of the smallest images come from the new microscope technology, the 'Pollen Classifynder' [system](#), developed by Massey University in New Zealand.

CSIRO and the Atlas of Living Australia purchased the microscope and automated image detection system to rapidly identify pollen - the tiny DNA-carrying grains so vital to agriculture and biodiversity. Dr David Lovell, Co-Leader of CSIRO Transformational Biology, says that pollen is vital to human life.

"Pollen is how most plants propagate, whether it's wheat in the paddock or wattle in the bush. Humans and ecosystems depend on it.

"It's important that we get information about Australia's biodiversity so

we can understand the role of pollen and [pollinators](#) in nature in the face of issues like climate change and deforestation."

The Classifynder microscope system takes the drudge-work out of counting and classifying pollen grains.

"As well as capturing pollen images, the system can use image analysis and machine learning to classify pollen into species.

Developing new and improved classifiers for Australian pollens will be a combined research effort for CSIRO, Australian National University (ANU) and Massey University," says Dr Lovell.

The Atlas of Living Australia has sponsored the purchase of the microscope and imaging system. The Atlas of Living Australia is a partnership between CSIRO, Australian museums, herbaria and other biological collections, the Australian Government, and local community groups.

The Atlas of Living Australia is a national initiative focussed on making Australia's biodiversity information more accessible and usable online.

"This technology will be a key part of that resource for researchers and the public and will aid conservation and ecology. We still know so little about our environment. It really is a race against time to get the information we can." said Dr Lovell.

The [microscope](#) system, located at the Australasian Pollen and Spore Atlas at ANU in Canberra, is one of an increasing number of automated imaging systems for identifying particular groups of animals and plants.

"We know people are going to love seeing pollen up close at the exhibition" he said.

Visitors to the 'Pollen Under the Microscope' exhibition will learn that:

one-third of the food we eat comes from plants pollinated by animals
some bees 'buzz-pollinate' flowers, vibrating them to shake the pollen
out one in five Australians suffers from hay fever and wattle pollen is
often incorrectly blamed.

Provided by CSIRO

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