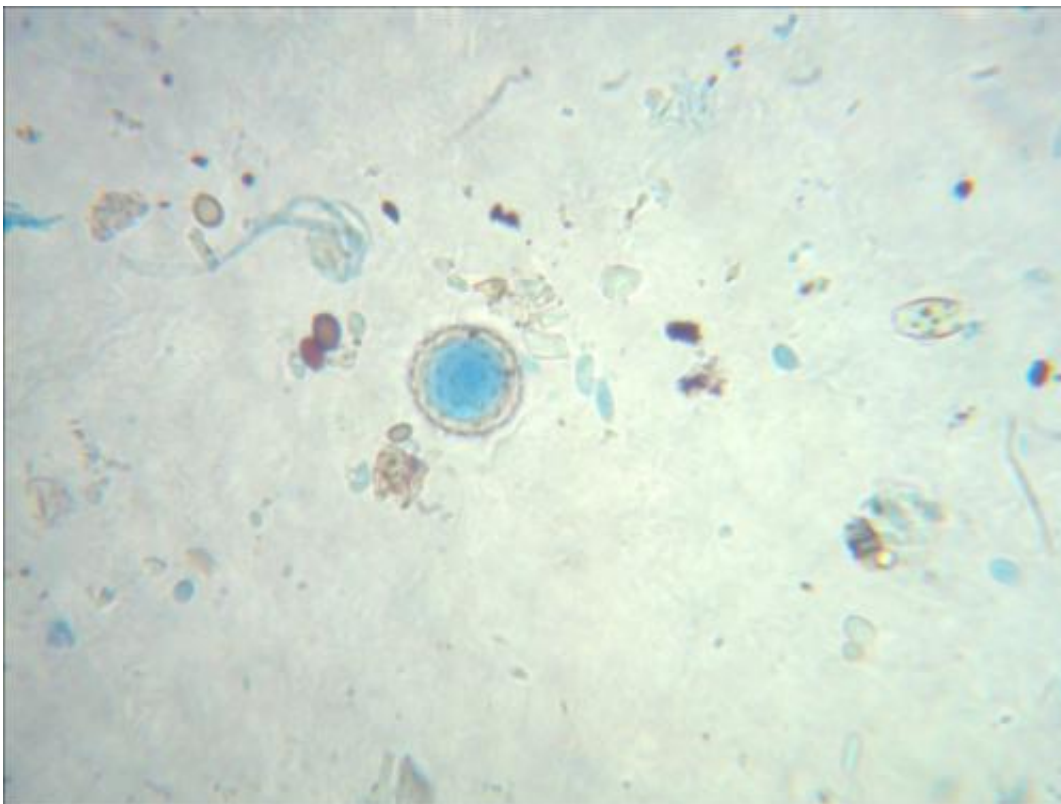


Scientists observe rare type of pollen at record levels in air for the first time in forty years (w/ Video)

September 26 2014



Microscope images of ragweed pollen. Credit: University of Leicester

Researchers at the University of Leicester have recorded a rare type of pollen that is a potent trigger of hayfever and asthma symptoms at record levels for the first time in four decades.

Ragweed, which grows in late-summer and early autumn, is one of the most notorious hayfever-causing plants in North America, but is rarely found in the United Kingdom as it requires long-lasting autumns before the first winter frost to grow and survive.

However, scientists from the University's Aerobiology and Clinical Mycology research group observed ragweed - which is not normally found in the air at all - for four consecutive days in the East Midlands earlier this month. On the third day, the level of ragweed was high enough to cause hayfever and [asthma symptoms](#) for individuals sensitive to the [pollen](#).

Research lead Dr Catherine Pashley from the University of Leicester's Department of Infection, Immunity and Inflammation explained: "Ragweed can't survive in the East Midlands because of our cooler climate compared to North America and Central Europe, so we were very surprised to see it when we analysed the pollen and fungi in the air earlier this month.

"Whether or not we continue to see more ragweed will very much depend on how mild this autumn is and when we have the first frost. If it is a late frost, it is likely that ragweed levels may increase this time next year.

"Pollen counts change on a daily basis and seasonally. It is really important to monitor pollen levels in the air to inform treatment for the millions of hayfever and asthma sufferers in the country. It can also be used as an indicator of climate change."

In conjunction with the Midlands Asthma and Allergy Research Association (MAARA), the research group routinely monitor the pollens and fungal spores present in the air using spore traps based at the University of Leicester. They have a database of airborne allergens for

the East Midlands that dates back more than forty years and have noted that historically there has never been more than a few grains of ragweed in the air on any one day, and most years the pollen is not seen at all.

Steve Watson, chairman of MAARA, added: "MAARA is a registered charity based in the East Midlands founded to undertake and fund research into the causes of asthma and allergy.



Microscope images of ragweed pollen. Credit: University of Leicester

"MAARA has invested a good deal of money over the years in building up this unique record of pollen and spore information for the East Midlands because it is an important resource for the millions of people who are affected by [asthma](#) and hayfever, both within the East Midlands

and throughout the UK. Without it, Cat and her team would not have had the base data to realise the importance of the recent findings on ragweed. MAARA is committed to the continuation of data collection and research in the East Midlands."

In Europe, ragweed was first seen in the 1960s and is the cause of much hayfever misery to sufferers in Central and Eastern Europe. It was predicted in the early 1990s that if annual average temperatures continue to increase by 0.2°C per decade, ragweed could spread north and be present in Central England by 2050. Now this observation made by the University of Leicester suggests this prediction could be coming true and could well mean an extended hayfever season well into the autumn for the 20 per cent of the population affected annually.

Provided by University of Leicester

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