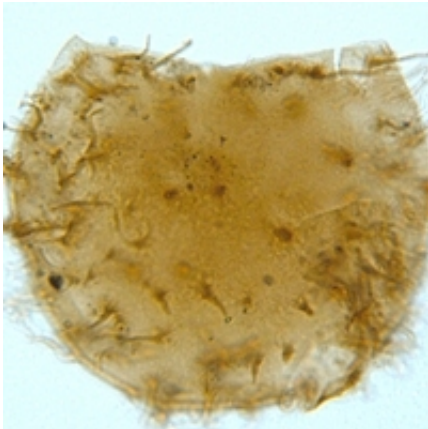


# Palynology professor to help revive vital science

April 7 2014, by David Stacey

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The University of Western Australia, Chevron and Woodside will launch an international search for an expert who can breathe new life into the discipline of palynology in WA.

Palynology - a specialist science widely used in the oil and gas industry and in the earth sciences to help understand environmental and climatic changes through Earth's history - is the study of plant pollen, spores and a variety of aquatic micro-organisms that lived from hundreds of millions of years ago up to the present day. The presence of particular kinds of microfossils in sediments and sedimentary rocks can shine a light on past environmental conditions and also point to the likely existence or otherwise of hydrocarbons.

At UWA, palynology has also proved significant in redefining the tectonic history of north-western Australia and Timor, with Professor David Haig and fellow researchers demonstrating how, tectonically, Australia has collided with, and uplifted, the island of Timor.

Winthrop Professor David Lumley, Chair in Geophysics and director of an energy geoscience research centre at UWA's School of Earth and Environment, said microfossils were important indicators of past environments.

"They're typically specific to certain geological time periods," Professor Lumley said. "If you take rock samples from a well or an outcrop, the 'palynomorphs' can tell you a lot about how old those rocks are and what climatic and [environmental conditions](#) existed at the time the rocks formed."

However, he said the pool of Australian palynological knowledge had been at risk of disappearing altogether due to the retirement of experts who had been instrumental in research and training the next generation of palynologists

The retirement of stalwarts such as Professor Haig - now an Honorary Research Fellow in the School of Earth and Environment - left a gaping hole in both areas.

"UWA has historically had a very strong group in this area in collaboration with the WA Geological Survey and Geoscience Australia," Professor Lumley said. "However, that goes back decades and now these people are all semi-retired and consulting part-time.

"Because it is a very specialist topic, it has been very difficult to teach the skills needed at university level anywhere in Australia - certainly in the last decade or so. Everyone is very concerned that we don't have any

young people coming through the university system developing skills in palynology - so before the experienced guys go fishing and don't come back to work, they want to pass on the torch."

Concern about the looming knowledge gap prompted UWA, Geoscience Australia, the WA Geological Survey, Woodside and Chevron to discuss ways to rejuvenate the field.

Late last year, Chevron and Woodside agreed to fund a new Professorship in Palynology at UWA for five years. A worldwide search will begin this month, with an appointment expected later this year.

Chevron Asset Development General Manager Gerry Flaherty said palynologists played an important role in Chevron's exploration activities, as their work allowed the company to determine ages of the rock layers that contained oil and gas, and correlate sedimentary layers between different wells.

"With limited teaching of palynology currently occurring in Australian universities, we are pleased to fund and support this professorship at UWA," Mr Flaherty said. "It will revitalise teaching and research in palynology in Australia, provide the industry with a new generation of palynologists and help create innovations that will allow us to develop our oil and gas fields in new and exciting ways."

Woodside Executive Vice President Global Exploration Phil Loader said [palynology](#) allowed the company to construct a detailed understanding of the depositional environments of its reservoirs.

"The knowledge provided by palynologists enables us to develop discovered reserves responsibly and identify new exploration targets," he said.

"Woodside is pleased to extend our support of Geosciences at UWA by funding the Professor of Palynology position. This teaching and research initiative will help advance a new generation of palynologists, who are needed to progress the industry's pursuit and development of global hydrocarbon resources."

Provided by University of Western Australia

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