



Beijing affords great opportunities, but is blighted by air pollution.

established excellent relationships with a number of colleagues in the Chi-

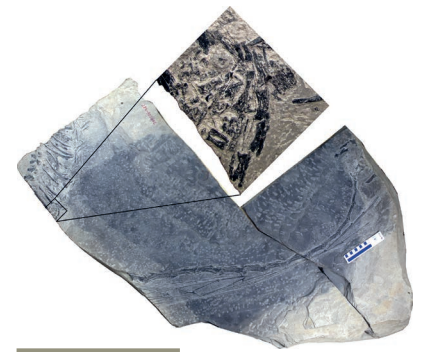
nese community, and we have become good friends on a personal level as well," he says.

Living in Beijing means that de Grijis is no stranger to air pollution. China's northern capital must often endure 'airpocalypses', or health-damaging levels of smog, which hit hard each winter. Despite government efforts to improve air quality by restricting factory emissions and toughening inspection procedures, China remains the world's deadliest country for outdoor air pollution, which kills more than one million people a year. The heavily industrialized and colder northern regions are the worst affected. "China's smog is a major problem and it's taking too long to improve," says de Grijis.

Scientists in the south are less affected by the dense smog. But there are other visible environmental concerns. For Joel Moser, a physics professor at Soochow University, the rising levels of water toxicity in Suzhou are worrying. Moser moved from Spain two years ago, where he was a researcher at the Institute of Photonic Sciences in Castelldefels. He says he was attracted by the opportunity of a professorship and higher levels of research funding. Suzhou is famed for its classically designed gardens and ancient water towns, but now the canals are heavily polluted. "Students tell me the dense algae in the water is still a recent trend. Some recall swimming in the nearby rivers not so long ago, when the water was still clear enough," he says. "Obviously, finding a balance between economic growth and environmental protection is challenging. But Chinese people are resourceful, and they will find a way."

A sense of anxiety about environmental living standards married with optimism for the future is common among foreign scientists. They point to the high levels of enthusiasm, talent and motivation of their students, warm reception from colleagues, and the affordability of smaller cities in comparison with their Western counterparts. "In the morning I often find fruits on my desk: a few bananas, an orange, and a handwritten note, which my students left as a token of appreciation," says Moser.

Naturally, the language barrier is a daily struggle, but it is possible to make it work, says Zach Smith, an American optics expert at the



BREAKTHROUGH

## ANCIENT REPTILE GAVE BIRTH TO LIVE YOUNG

*Pregnant fossil proves that not all archosaurs laid eggs.*

BY JAMIE FULLERTON

**A**round 245 million years ago, just over 150 kilometres east of what is now the city of Kunming in southern China's Yunnan province, a pregnant *Dinocephalosaur* died. In February 2017, the long-necked, flesh-eating marine animal and her fossilized embryo provided proof that members of her animal group could give birth to live young. Previously, researchers thought that the Archosauromorpha, ancient reptiles whose modern-day ancestors include crocodiles and birds, only laid eggs.

Palaeontologist Liu Jun and his team at the Hefei University of Technology in China published their analysis of the fossilized beast last year (J. Liu *et al. Nature Commun.* **8**, 14445; 2017). The specimen was one of 10,000 collected during 2008 in Luoping Biot National Geopark, an area that was long ago covered in shallow water. This is what helped to preserve the fossil after it died, says Liu.

Liu hopes that the finding will inspire other scientists to look for further evidence of live births in ancient reptiles, adding that studying fossils that have already been excavated could be as fruitful as searching for newly uncovered examples. He cites a 2011 *Science* paper showing live birth in a plesiosaur, a marine predator that went extinct around 66 million years ago. The plesiosaur specimen was excavated in 1987 in Kansas (F. R. O'Keefe & L. M. Chiappe *Science* **333**, 870-873; 2011). "We need to do more work with older specimens," Liu says.

Liu said that he received financial support from the China Geological Survey (CGS) and the National Natural Science Foundation of China. He suggests that although science funding levels in China are extremely healthy, they can be tied to the whims of leadership figures. China's former Premier, Wen Jiabao, used to be a geologist. When Wen retired in 2013, "geological research and investment went down, with less and less funding from the CGS", says Liu. ■

administrators to push through projects, such as setting up a lab, if they encounter resistance from other staff. In a country where an individual's *guanxi* — social clout — is key to getting things done, few people risk their professional future by offending others (see 'Need-to-knows'). Scientists also say the intense competition in Chinese research can drive unscrupulous behaviour. Neuroscientist Bai Lu of Tsinghua University in Beijing notes that colleagues are often reluctant to share their ideas for fear they might be stolen or published by others.

### THE CHINA EXPERIENCE

Foreign scientists working in China say that assimilating into local culture is a tough but rewarding task. Richard de Grijis, a Dutch astrophysicist who works at the Kavli Institute for Astronomy and Astrophysics at Peking University in Beijing, points out that nothing can be

## "IT TAKES EFFORT TO BUILD UP A NETWORK AND BE SEEN AS A RESPECTED COLLEAGUE."

done without strong relationships on a practical and personal level.

"It takes a lot of effort to build up a network and be seen as a respected colleague; that's not something you do overnight. I have

University of Science and Technology of China (USTC) in Hefei. Smith's decision to move was motivated by the offer of a 'dual-hire'. He and his Chinese wife Kaiqin Chu, who studies the same field, found it difficult to find jobs at ►