**Which Came First: Pollinating Insects or Flowers?**

Pollinating insects and plants have co-evolved throughout their history.

From about 125 million to 90 million years ago, cone-bearing plants were replaced by flowering plants as the dominant vegetation. This switch – the ‘Cretaceous Terrestrial Revolution’ – had profound effects on pollinating insects.

Dr Conrad Labandeira of the Smithsonian’s National Museum of Natural History wanted to answer a chicken-and-egg question: did insect pollination or flowers come first? To answer this question, his team examined insect fossils from before the Cretaceous Terrestrial Revolution.

First, they examined a beetle trapped in amber along with pollen from a cone-bearing plant. This provided evidence that the beetle facilitated pollination between cones.

Similarly, the researchers examined four thrips specimens covered with pollen. They believe that donut-like rings around hairs on these insects represent specialised structures for carrying pollen.

They also discovered scorpion-flies that had long proboscises for extracting nectar-rich ‘pollination drops’ from cone-bearing plants.

Finally, the team discovered a fly from the early Cretaceous Period, with pollen stuck to its face.

Dr Labandeira’s research suggests that insect pollination evolved between 300 million and 250 million years ago – over 140 million years before flowers first appeared.

X Lin, CC Labandeira, C Shih, CL Hotton, D Ren, Life habits and evolutionary biology of new two-winged long-proboscid scorpionflies from mid-Cretaceous Myanmar amber, Nature Communications, 2019, 10, 1235. doi.org/10.1038/s41467-019-09236-4