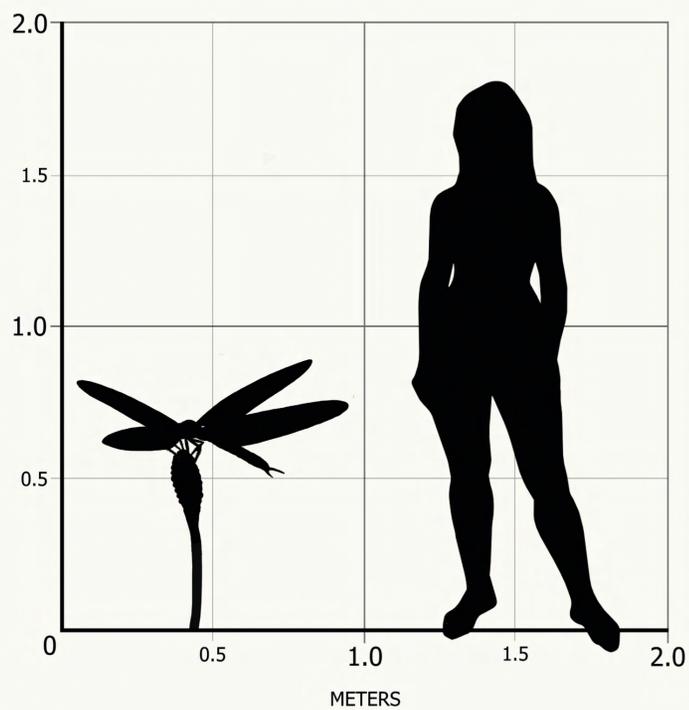
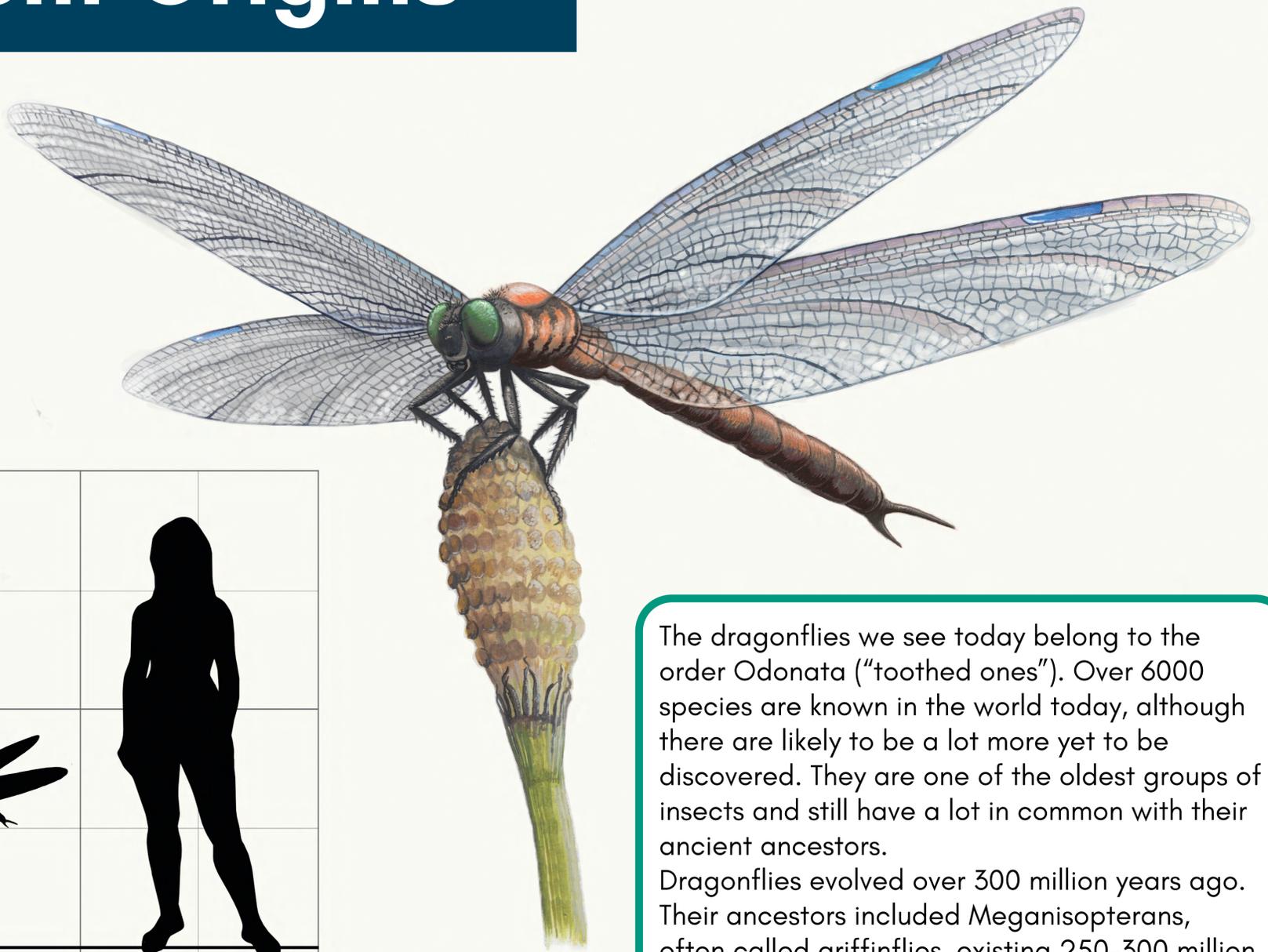


Ancient Origins



Meganeura monyi © Emily Willoughby

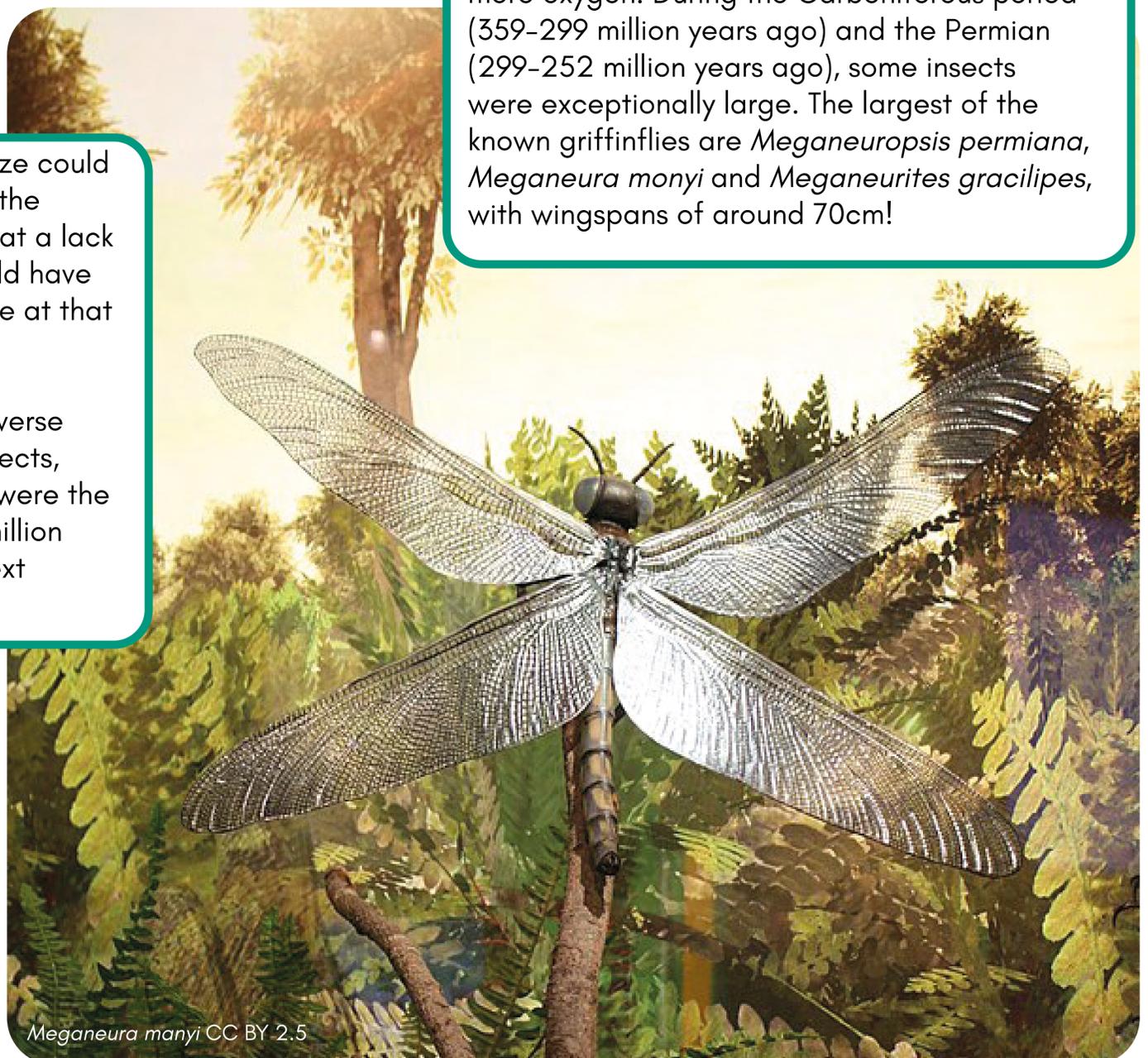


The dragonflies we see today belong to the order Odonata ("toothed ones"). Over 6000 species are known in the world today, although there are likely to be a lot more yet to be discovered. They are one of the oldest groups of insects and still have a lot in common with their ancient ancestors.

Dragonflies evolved over 300 million years ago. Their ancestors included Meganisopterans, often called griffinflies, existing 250-300 million years ago. The planet they inhabited looked very different from now, the continents had not drifted apart and the atmosphere contained more oxygen. During the Carboniferous period (359-299 million years ago) and the Permian (299-252 million years ago), some insects were exceptionally large. The largest of the known griffinflies are *Meganeuropsis permiana*, *Meganeura monyi* and *Meganeurites gracilipes*, with wingspans of around 70cm!

It is hypothesised that their large size could be due to the increased oxygen in the atmosphere. It is also suggested that a lack of aerial vertebrate predators would have allowed these giant insects to thrive at that time.

Insects are the largest and most diverse group of animals on the planet. Insects, including our dragonfly ancestors, were the first animals to evolve flight - 175 million years before the pterosaurs, the next animals to take to the skies.



Meganeura manyi CC BY 2.5