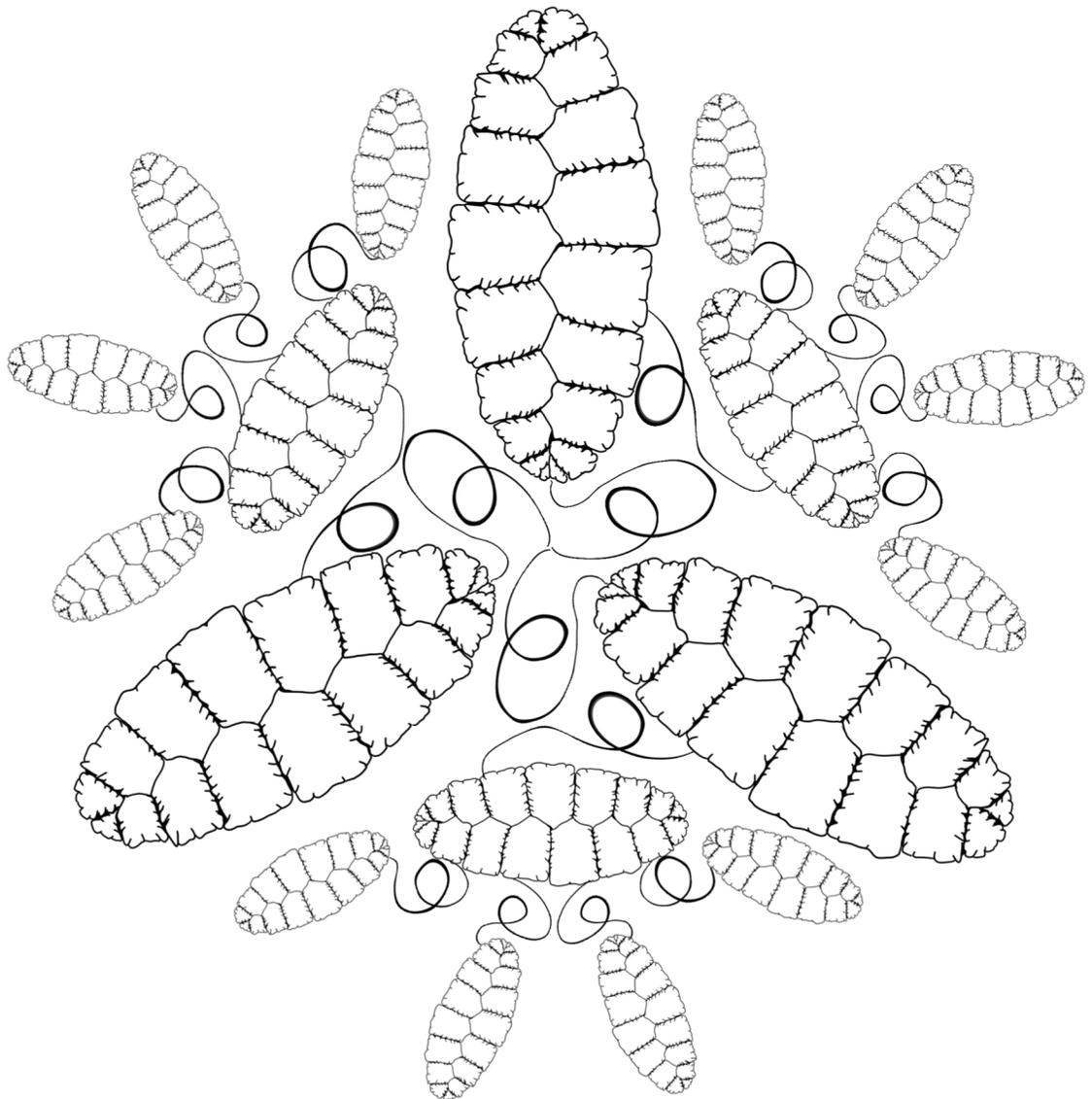


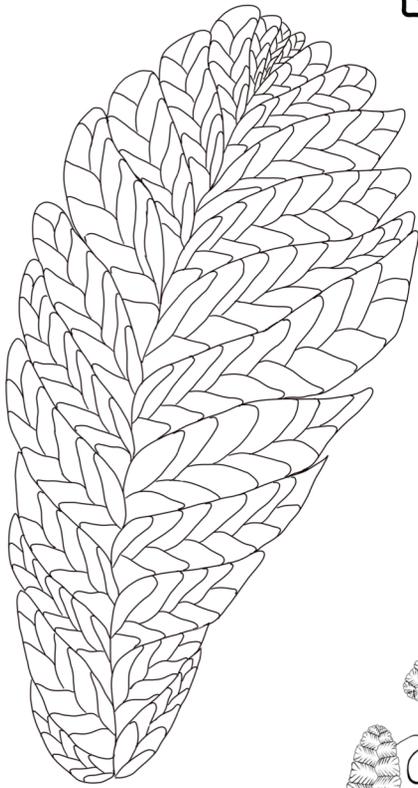


# PALAEOCOLOURING THE EDIACARAN



*Fractofusus*

Illustrations & Text by Sasha Dennis



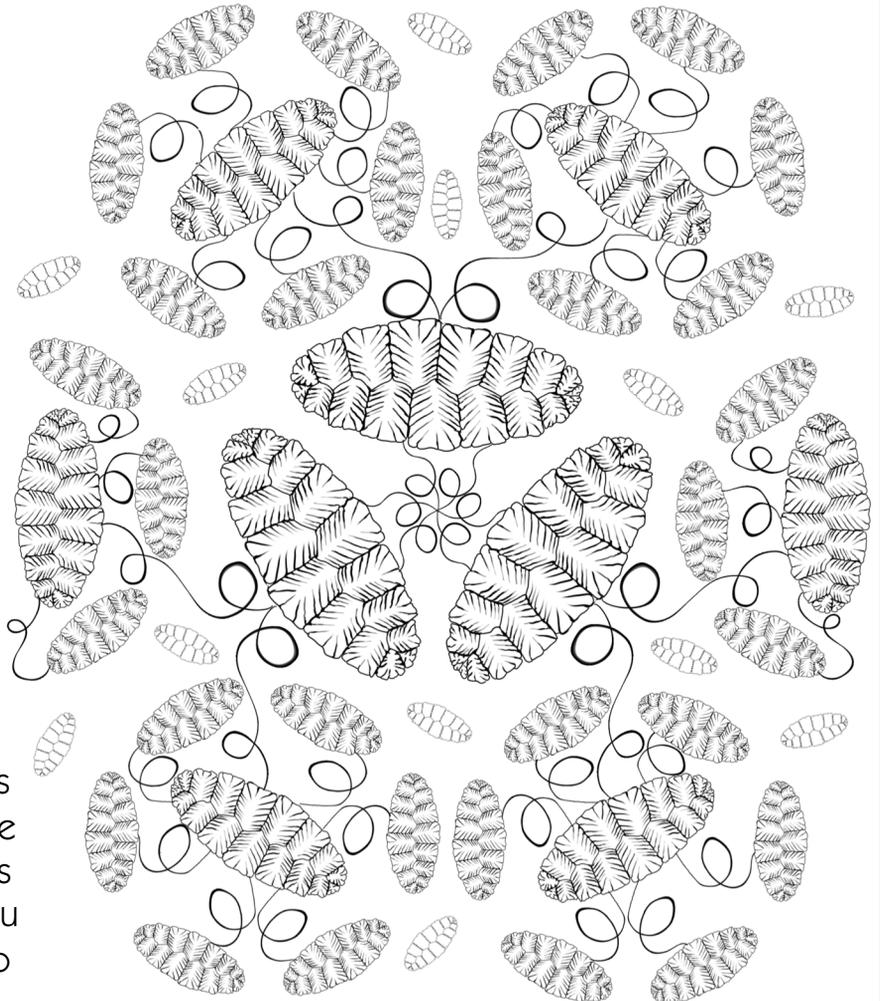
The Ediacaran (ee-dee-ak-a-ran) was a time period 635 – 541 million years ago



*Beothucus*

The Ediacaran Biota lived around 571 – 540 million years ago, making them over 300 million years older than the dinosaurs!

*Fractofusus*

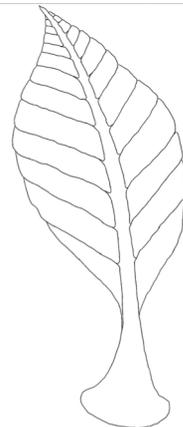
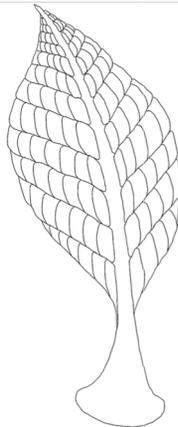
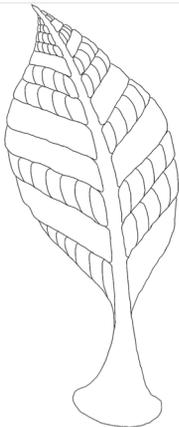
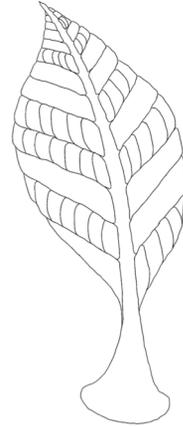
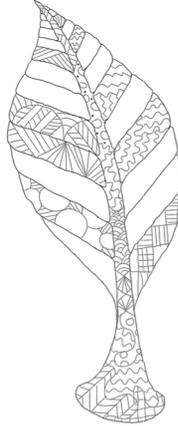


They are the oldest fossils of big creatures we have found – There are lots of older fossils but they are so tiny you need a microscope to see them!



They lived at the bottom of the ocean, in either deep or shallow water

← *Charniodiscus*



They had soft, squishy bodies, meaning it was harder for them to turn into fossils, and so they can only be found today in special places



## For The Older Colourers

These colouring pages are of the “Ediacaran Biota”, some of the oldest macrofossils (visible to the naked eye) ever discovered.

The Ediacaran is a geological time period (635-541mya), and the **Ediacaran Biota** lived around 570-541mya (over 300 million years **before** the dinosaurs).

The fossils can be found all over the world, with the most famous sites in south Australia, Russia, Newfoundland, Namibia and the UK.

The Ediacaran Biota were **benthic** marine organisms; they lived on the bottom of the ancient oceans in both deep and shallow water. Most palaeontologists who study Ediacaran organisms agree that they are some of the earliest animals found in the fossil record, and recently scientists have found **biomarkers** (biologically produced chemicals that can tell you different things about the past) in the fossil *Dickinsonia* (Dik-in-so-nee-a) that showed they are animals [1].

Ediacaran animals were all **soft bodied**, meaning it was difficult for them to fossilise, so they are only found in “sites of exceptional preservation”.

Many of them had **fractal** body patterns (branching over and over with the same pattern). One great example of this in these colouring pages is *Fractofusus* (Frak-toe-few-sus).

We have also been able to learn about the reproduction of *Fractofusus* by looking at how they are spread out on the rock surface. Their spatial distribution showed they reproduced with **stolons**, a bit like strawberries do, cloning themselves with runners. (We’ve even shown this in our colouring pages!)

## References

[1] Bobrovsky, I., Hope, J. M., Ivantsov, A., Nettersheim, B. J., Hallmann, C., Brocks, J. J. (2018) Ancient steroids establish the Ediacaran fossil Dickinsonia as one of the earliest animals. *Science* **361**, 1246 – 1249

[2] Mitchell, E. G., Kenchington, C. G., Liu, A. G., Matthews, J. J., Butterfield, N. J. (2015) Reconstructing the reproductive mode of an Ediacaran macro-organism. *Nature* **524**, 343 – 346



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